

DISTRIBUTION AND WAREHOUSING



The Business Paper of the Warehouse Industry

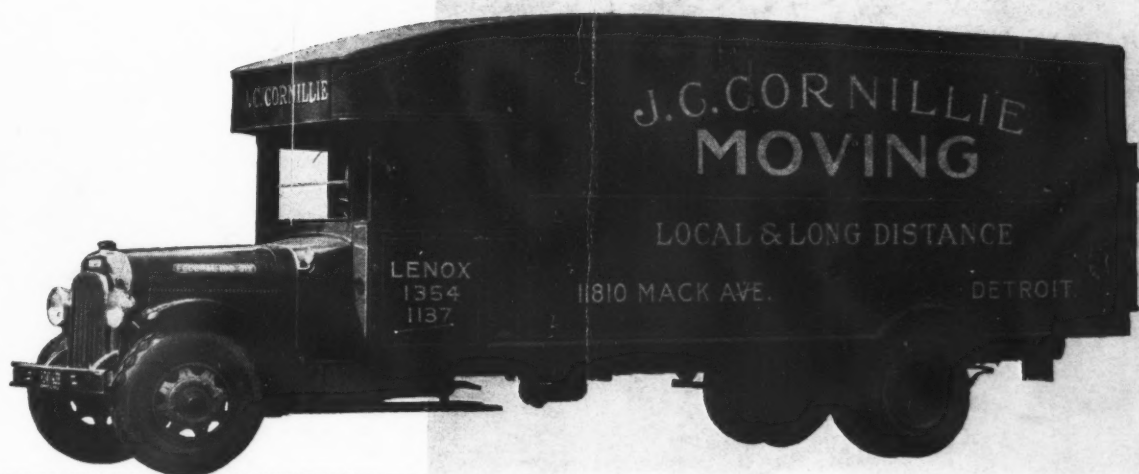
Reg. U. S. Pat. Off.

Vol. 30, No. 2

243-249 West 39th St., New York

February, 1931

More Evidence to Prove
IT'S GOOD BUSINESS TO DEPEND ON
F E D E R A L



The Complete Federal Line

BEVEL DRIVE MODELS	WORM DRIVE MODELS
1-1 Ton 4 Cyl. \$ 830.00	2 Ton 6 Cyl. \$2360.00
1-1 Ton 6 Cyl. 1090.00	2-3 Ton 6 Cyl. 2915.00
1 Ton 6 Cyl. 1525.00	3-3 Ton 6 Cyl. 3860.00
2 Ton 6 Cyl. 1855.00	4-5 Ton 6 Cyl. 4735.00
2 Ton 6 Cyl. 2185.00	*4-5 Ton 6 Cyl. 4960.00
2-3 Ton 6 Cyl. 2740.00	7 Ton 4 Cyl. 5085.00
	7 Ton 6 Cyl. 5810.00

SIX WHEEL MODELS

6 Ton 6 Cyl. \$6000.00
*6 Ton 6 Cyl. 6500.00
*8 Ton 6 Cyl. 7500.00

Prices are for standard chassis F. O. B. Detroit
*Westinghouse Air Brakes standard equipment

J. C. Cornillie has purchased 10 Federal trucks since 1917. He is now standardizing on Federals entirely for his business. This case is typical of so many others in this particular industry. A test of time proves that Federals are dependable always and continue year after year to deliver the profit miles that make their purchase so sound an investment.

FEDERAL MOTOR TRUCK COMPANY
5798 Federal Avenue Detroit, Michigan

FEDERAL TRUCKS

CABS AND BODIES

11,835,012 Advertising Messages

Will tell the service story of A. W. A. Merchandise Warehouses

Shown here are the business and general magazines to be used in 1931 by the Merchandise Division of the American Warehousemen's Association in its campaign to sell the public warehousing industry to

in 1931

If yours is an A. W. A. merchandise warehouse, prompt action on your part will enable you to participate in this campaign and get the sales leads developed for your territory. Otherwise, your competitors in your city now active in the campaign will get the benefit of all the prospective business which the campaign is creating.

If you are not an A. W. A. member, and would like to join the Association in order to participate in the campaign, full details as to membership requirements, dues, etc., may be had from the Secretary.

American business men. These publications have a combined circulation of 986,251; and during the year 1931 a total of more than 11,835,012 individual advertisements will be circulated through them. The tremendous force of this great campaign will build new business for every A. W. A. warehouse participating.



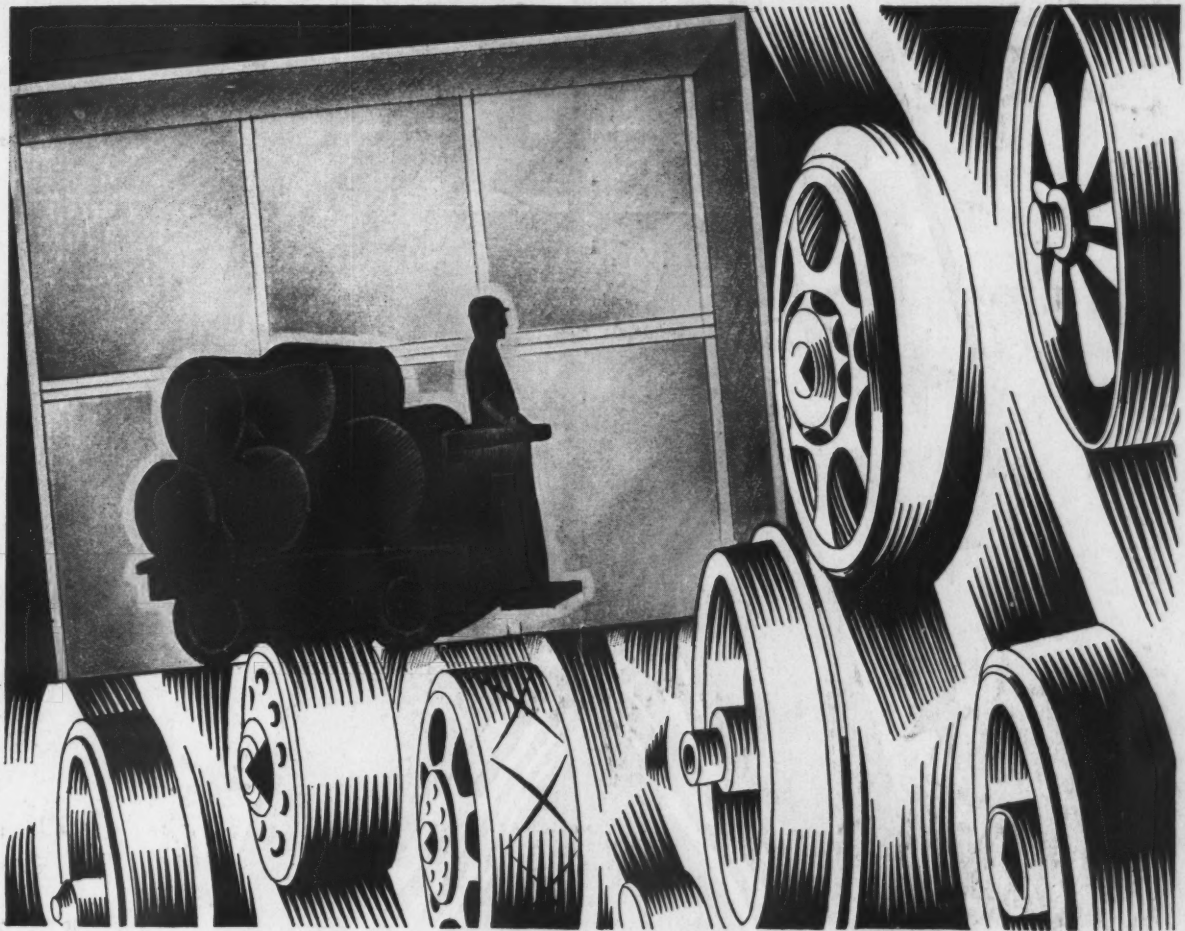
Broadsides like these, mailed periodically to a selected list of 25,000 storers and marketing executives, are developing sales leads for A. W. A. warehouses to follow-up in the creation of new accounts.

This booklet, issued by the A. W. A. has been termed: "The most complete and yet the most concise statement that has yet appeared in print regarding the place of Public Merchandise Warehouses in distribution."

Plans for 1931 call for the publication of special bulletins on warehousing methods, warehousing services, etc. . . material which will be of interest and value to all manufacturers and distributors.

Merchandise Warehouse Division
American Warehousemen's Association
1823 Adams-Franklin Building
Chicago, Illinois

THE DOORWAY OF AMERICA'S WAREHOUSE FREIGHT ELEVATOR TRAFFIC



PEELLE MOTORIZED FREIGHT ELEVATOR DOORS

wheels...symbol of traffic...movement...carriers of men and produce. Wheels of industry traverse the continent, others the route confined within the walls of industrial plants. The wheels of interior traffic must travel vertically as well as horizontally...up and down a shaftway as well as across a floor. At this crucial cross-road...the point of entrance and exit between the floor and elevator car...Peelle Doors smooth the path of countless wheels, make possible their swift change to vertical progress. They safeguard against accident and spread of fire...act both as bridge and wall. Motorized...opening and closing at the touch of a button...Peelle Doors speed the movement of raw material and finished product and lower plant distribution costs. Write for catalog, or consult our engineers.

THE PELLE COMPANY, BROOKLYN, NEW YORK
Boston, Chicago, Cleveland, Philadelphia, Atlanta and 30 other cities
In Canada: Toronto and Hamilton, Ontario



WHEN WRITING ADVERTISERS MENTION DISTRIBUTION AND WAREHOUSING

DISTRIBUTION AND WAREHOUSING

The Business Paper of the Warehouse Industry

Established 1901

Reg. U. S. Patent Office

Editorial Department

Kent B. Stiles, Editor
H. A. Haring, Contributing Editor
Leo T. Parker, Legal Editor
Philip L. Sniffin, Motor Freight Editor

Washington Bureau, 1163 National Press Building
George H. Manning, Manager

St. Louis Office—Roy M. Edmonds
1251 Syndicate Trust Building

Business Department

Andrew K. Murray, Business Manager

EASTERN MANAGER, P. J. O'Connor

WESTERN MANAGER

Willis D. Leet
Room 618, 612 North Michigan Avenue, Chicago

PACIFIC COAST REPRESENTATIVE

Don F. Harner, 5203 Hermosa Ave., Los Angeles, Calif.

PUBLISHED ON THE FIRST OF EACH MONTH BY
DISTRIBUTION and WAREHOUSING PUBLICATIONS, Inc.

249 West 39th Street, New York City
Phones, LOngacre 5-1888 and 5-1889

Andrew K. Murray, President and General Manager
Kent B. Stiles, Vice-President
H. S. Webster, Jr., Secretary
E. P. Beebe, Treasurer

Associated with United Business Publishers, Inc.,
239 West 39th Street, New York City

Copyright, 1931, by Distribution and Warehousing Publications, Inc.

Subscription Rates

United States.....\$3.00 per year
Canada.....3.50 per year
Foreign Countries.....4.00 per year
Single Copies, 30c. each; except January Issue, \$5.00

Entered as second-class matter January 29, 1916, at the
Post Office at New York under the act of March 3, 1879

Vol. 30 CONTENTS—FEBRUARY, 1931 No. 2

ARTICLES

Federal Barge Lines Deny I. C. C. Jurisdiction in "Free Storage" Case. By Horace H. Herr.....	9
Inland Waterways Corporation Has About-Faced. By Kent B. Stiles.....	10
Exit Drum and Enter Tank in Industrial Fluid Distribution. By Carleton Cleveland.....	13
High Lights of N. F. W. A. Winter Convention.....	14
Summary of A. W. A. Winter Convention.....	17
Production Surplus of 1929 Now Largely Liquidated. By John H. Van Deventer.....	18
Distribution Article No. 71. The Unit Carload. By H. A. Haring.....	20
Traffic Management Is Analyzed in Government Survey. By Stephens Rippey.....	24
Warehouses Were 68.8% Occupied on Oct. 31. By Kent B. Stiles.....	26
Developing New Business No. 63. Storage of Bottled Gas. By H. A. Haring.....	32
Law of Delayed Payments and Bankruptcy. By Leo T. Parker.....	34
Lord Macaulay in 1830 Looked Ahead One Century.....	36

DEPARTMENTS

This Month's Features in News and Articles.....	7
"Two Bits" (Vol. X; No. 9). By Kent B. Stiles.....	23
From the Legal Viewpoint. By Leo T. Parker.....	28
Motor Freight. By Philip L. Sniffin.....	37
With the Associations.....	46
How's Business Going to Be This Month?.....	49
New Buildings, Incorporations, Etc.....	60
"Andy Says" and Convention Calendar.....	81

NEWS FEATURES

Railroads Seek Lower Rates to Meet Truck Competition.....	41
Further I. C. C. Hearings in Truck Regulation Inquiry.....	43
Mothproofing Solutions Discussed in Government Report.....	50
Bush Says America Will Lead World to Recovery.....	51
Murphy Household Goods Business Acquired by Fidelity.....	52
Rates Should Be Placed on Bills of Lading.....	52
Johnson Terminal Opens in Evansville.....	53
Death Removes O. C. Mackay and Other Executives.....	54
12 Railroads Entering New York Accept Terminal Plan.....	55
Sydney Green Joins Gerstenlager Co.....	56
Nye Bill Would Make Trade Practice Rules Legal.....	57
Ferguson Assures Protection of Warehousing Premiums.....	58

Where to Buy 45
Index to General Advertisers.....157
Index to Shippers Index Advertisers.....157-159

MOVE YOUR SHIPMENTS BY JUDSON

In using JUDSON SERVICE you
are Safeguarding the interests of
your clients as well as yourself.

HOUSEHOLD GOODS
AUTOMOBILES
IN
THROUGH CARS
AT
REDUCED RATES

to and from
THE WEST
to FLORIDA
and ABROAD

JUDSON FREIGHT FORWARDING CO.

THE NATIONAL FREIGHT CO., LESSEE

GENERAL OFFICES, 1100 SOUTH STATE STREET

Household Goods and Automobile Division,
140 South Dearborn Street

CHICAGO, ILL.

OFFICES:

BOSTON.....836 Old So. Bldg.	NEW YORK CITY Pier 2, North River
CHICAGO.....1100 S. State St.	OAKLAND, CALIF. 40th and San Pablo Ave.
CINCINNATI, O. Court St. & Gilbert Ave.	OMAHA, NEBR....1001 Jones St.
CLEVELAND, O. E. 38th St. and Hamilton Ave.	PHILADELPHIA, PA. 812 Lafayette Bldg.
DAYTON, O....420 Washington St.	PITTSBURGH, PA....1013 Penn Ave.
DENVER, COLO....1708 16th St.	PORTLAND, ORE. 355 Everett St.
DES MOINES, IOWA 7th and Cherry Sts.	ST. LOUIS, MO. 1137 Boatmen's Bank Bldg.
DETROIT, MICH. 503 Hammond Blvd.	ST. PAUL, MINN....480 Broadway
KANSAS CITY, MO. 11th and Mulberry Sts.	SAN FRANCISCO 116 New Montgomery St.
LOS ANGELES, CALIF. 108 W. 6th St.	SEATTLE, WASH. 2203 First Ave. South
MILWAUKEE, WIS....Foot of 2nd St.	SPOKANE, WASH. 310 W. Pacific Ave.
MINNEAPOLIS, MINN. 510 Hodgson Bldg.	TACOMA, WASH....109 W. 15th St.
NEWARK, N. J....965 Broad St.	TOLEDO, OHIO Monroe and Water Sts.
	VANCOUVER, B. C. 1001 Stock Exchange Bldg.
	WICHITA, KAN....815 E. 2nd St.

WHEN WRITING ADVERTISERS MENTION DISTRIBUTION AND WAREHOUSING

A good job gets a great big hand...

J. R. CALDWELL
AKRON-DETROIT MOTOR FREIGHT



DETROIT, MICHIGAN

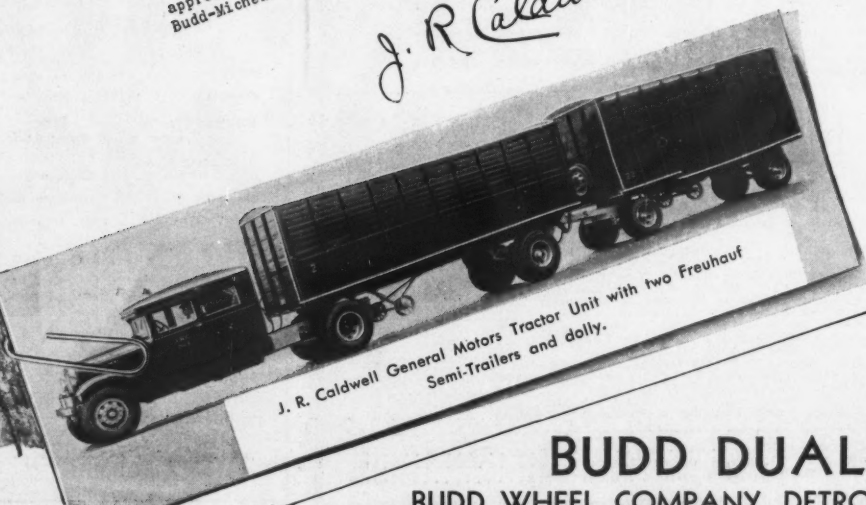
Budd Wheel Company,
Detroit, Michigan.
Gentlemen:

In the operation of our thirty odd units of equipment, we find it is more necessary now than ever before to "take-off" on time, grind through the miles at a minimum cost per pound and deliver to the customer on schedule time.

We feel that Budd's separate locking of the rear wheels - wheels that are demountable at the hub instead of the demountable rim type - are big contributions to the demands of modern truckmen for easy changes, longer tire mileage and appearance. You have done a good job and we have expressed our appreciation by equipping every Caldwell unit with Budd-Michelin Duals.

Yours very truly,

J. R. Caldwell



J. R. Caldwell General Motors Tractor Unit with two Freuhauf Semi-Trailers and dolly.

BUDD DUALS
BUDD WHEEL COMPANY, DETROIT



BUILT FOR HEAVY-DUTY HAULING

Inspection of their powerful engines, alone, quickly proves how sturdy, how modern, how thoroughly "all-truck" Dodge Heavy-Duty Trucks actually are. And beneath the clean-cut, rugged exterior of one of these 96-horsepower engines are full force-feed lubrication, 100-pound

crankshaft, 7 bearings, crankcase ventilator, aluminum-alloy pistons and many other features that insure power, dependability, low cost and long life.

Inspect Dodge Heavy-Duty Trucks—their engines, axles, transmissions, frames, springs. Select the type that fits your needs—payload capacities range from 3,600 to 11,175 pounds. Buy it complete with standard or special body.

THE COMPLETE LINE OF DODGE TRUCKS RANGES IN
PAYLOAD CAPACITIES FROM 1,200 TO 11,175 POUNDS—
PRICED, CHASSIS F. O. B.
DETROIT, FROM \$435
TO \$2695, INCLUDING
1½-TON CHASSIS AT

\$595

DEPENDABLE
DODGE HEAVY DUTY TRUCKS

WHEN WRITING ADVERTISERS MENTION DISTRIBUTION AND WAREHOUSING



from

Direct Sailings (Without Lighterage) From the Port of
Philadelphia to Principal Sea Port Countries of the World

PHILADELPHIA

"The Workshop of the World"

**...you can reach more people with less effort
than from any other center in the United
States. To speed up distribution, locate your
plant in Philadelphia. Send for information.**

Address Department DD for booklet, "Production and Distribution in the Philadelphia Area"

PHILADELPHIA BUSINESS PROGRESS ASSOCIATION
1442 Widener Building, Philadelphia

WHEN WRITING ADVERTISERS MENTION DISTRIBUTION AND WAREHOUSING

This Month's Features in News and Articles

"1931 America Forward March"

THE SECOND of the return-to-normalcy

business articles by John H. Van Deventer, industrial consultant of the United Business Publishers, will be found on pages 18 and 19. And there is a timely editorial on page 25. What Lord Macaulay thought a century ago is pertinent to thinking men today—turn to page 36.

Conventions

HIGHLIGHT REVIEWS of the winter meetings of the industry's two national trade associations are published this month as "spot news"—the National Furniture Warehousemen's Association, page 14; the American Warehousemen's Association, page 16. Watch for more detailed reports in the March issue.

Government Competition

DENIAL OF I. C. C. jurisdiction in the "free storage" situation has

been entered by the Inland Waterways Corporation, while the American Warehousemen's Association reiterates its allegations of law violations—page 9. Editorial comment on page 10.

"How's Business?"

A FORECAST of conditions as charted by thirty-four economic experts—editors of magazines published by the United Business Publishers, Inc.—appears on page 49.

Industrial Fluid

PENICK & FORD, INC., Iowa corn syrup producers, is now distributing through public warehouses, an arrangement having been made with the Currier-Lee company in Chicago. Read Carleton Cleveland's story of this business development—page 13.

Law of Bankruptcy

AND ITS RELATION to warehousing are discussed by Leo T. Parker, attorney, in the thirty-seventh of his series of legal articles. See page 34.

Legal Knots

LEO T. PARKER, an attorney, unties them on request for warehouseman and traffic manager. Borrow on his knowledge and experience. This authority also reviews the latest Court decisions of importance to the industry. Turn to page 28.

Motor Freight

LET YOUR TRUCKS do their part toward a better 1931, suggests Philip L. Sniffin, advisory automotive engineer, on page 37. Railroads seek lower rates to meet motor

truck competition—page 41. New models announced—page 42. Further I. C. C. hearings on the truck regulation inquiry—page 43.

Necrology

PROMINENT MEN of warehousing have passed on in recent weeks. They include Odin C. Mackay, president of the cold storage division of the American Warehousemen's Association; James I. Buchanan, Charles N. Fitz, John Wetzel, and L. R. Bailey. Page 54.

Occupancy and Tonnage

A SLIGHT ADVANCE in the average occupancy of merchandise storage space was reported on Oct. 31 as compared with Sept. 30, according to Government figures made public late in January. While the October percentages range lower than in the 1929 peak period, they scale higher than in the corresponding period two years ago. For table and interpretative comment turn to page 26.

Proper Packing

THE UNIT CARLOAD is something relatively new in preparing shipments for movement by rail. Its advantages and economies are set forth by H. A. Haring in the seventy-first article of his "Distribution" series. Turn to page 20.

Solvency

NEW YORK STATE has issued a 1931 certificate of financial responsibility to the Consolidated Indemnity & Insurance Co., in which members of the National Furniture Warehousemen's Association are policyholders to the extent of more than \$120,000, and the Consolidated has severed all connection with the closed Bank of United States in New York. Robert M. Ferguson, an insurance expert widely known in our industry, has been elected a director of the Consolidated. Read this important news story—page 58.

Storing Bottled Gas

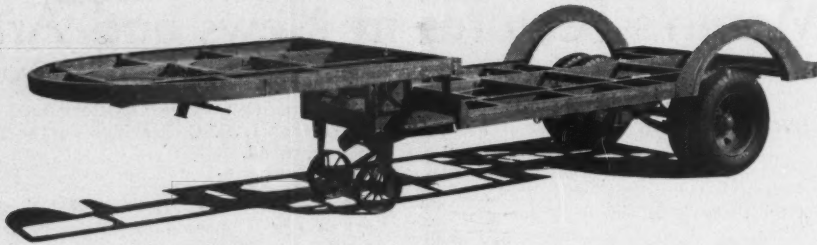
FOR DOMESTIC USE is the subject of H. A. Haring's "New Business for Warehouses" article. Here are some timely suggestions for filling some of that warehouse space. See page 32.

Traffic Management

AN ANALYSIS, based on a Federal survey, has been issued by the Department of Commerce. Stephens Rippey summarizes the results in Washington correspondence, beginning on page 24.

Directory of Warehouses Pages 82-156
Where to Buy Department Pages 65- 79

UNITED VAN SERVICE... *finds*



Trailmobile De Luxe Van Chassis exactly suited to its needs



Thrilling Beauty

The finest looking as well as the finest built. Cab and van made to harmonize. Lines and colors of both blend perfectly—even the roof is quite unusual. Lines more graceful, color combinations more striking, elements better balanced, you've never seen.

DESIGNED and built to meet every requirement of efficient, speedy, economical long distance moving, it was inevitable that United Van Service, Inc., should prefer Trailmobile De Luxe Van chassis.

Among its outstanding points are the continuous channels which ex-

tend from front to rear, well under the raised or "nose" section, and give adequate support where most needed. Frame has amazing lightness, made possible by new steel alloy, and brute strength, due to reinforcing where greatest stresses occur. Of the built up, cut riveted, extra strong type, it is truly unsurpassed in stamina, rigidity and durability. Still other advantages are curved front cross member, fifth wheel underneath frame, reinforced wheel housing, outer rail above level of extension brackets, extra large king pin, and above all the very finest of materials known to the automotive industries. Ask for complete specifications and prices. State model in which you are interested, whether 800, 1,000, 1,200, or 1,400 cubic feet.

**"TRAILERIZE
AND
ECONOMIZE"**

LAPEER-TRAILMOBILE

General Sales Department

OAKLEY, CINCINNATI, OHIO

**Fully Automatic and Manual Semi-Trailers, Four Wheel
Trailers, Pole Trailers and Carryalls**

LAPEER - Trailmobile

Mfr'd. by Lapeer Trailer Corp., Lapeer, Michigan

Mfr'd. by The Trailmobile Co., Oakley, Cincinnati, Ohio

Representatives in all Principal Cities

WHEN WRITING ADVERTISERS MENTION DISTRIBUTION AND WAREHOUSING

DISTRIBUTION AND WAREHOUSING



The Business Paper of the Warehouse Industry

Reg. U. S. Pat. Office.

Volume 30

NEW YORK, FEBRUARY, 1931

No. 2

Federal Barge Lines Deny I. C. C. Jurisdiction

By
HORACE H. HERR

Government Agency Pleads Legal Technicality in "Free Storage" Situation, While Warehousemen's Brief Reiterates Charges of Law Violations by Inland Waterways Corporation

DISTRIBUTION AND WAREHOUSING'S
Washington Bureau,
1163 National Press Building.

WHEN does storage of commodities cease to be part of the transportation function of a common carrier? Does the Interstate Commerce Commission have jurisdiction over the storage rates charged by a water carrier or in cases where the storage is incident to a water-rail haul?

Around these two major questions are built the respective arguments of the merchandise division of the American Warehousemen's Association, the complainant, and the Inland Waterways Corporation, the defendant, as set forth in their briefs in Docket 23510 involving the Federal Barge Lines' practices and charges on storage-in-transit.

While the Inland Waterways Corporation, the Federal agency operating barge lines on the Mississippi and Warrior rivers, makes some pretense of justifying its practices and charges at such ports as Memphis, Birmingham and Holt, its major defense is its insistence

that the issues in this case are not within the jurisdiction of the Interstate Commerce Commission.

When copies of the briefs became available here early in January, considerable surprise and disappointment was expressed by transportation and warehousing interests that the Inland Waterways Corporation, in its brief, showed a disposition to plead the legal technicality rather than squarely meet the issues raised in the warehousemen's complaint.

The emphasis placed on the question of whether or not the Interstate Commerce Commission has jurisdiction in the controversy is further evidence of the possibility that Congressional action may be required before the discriminations complained of can be eliminated.

In the event that the Interstate Commerce Commission should accept the defendant's view and hold that it had no authority over storage charges of water carriers or such charges when the storage is incident to a water-rail haul, the remedy necessarily would be an appeal to Congress for some such legislation as already has been proposed by Representative John McDuffie of Alabama.

THE merchandise division of the American Warehousemen's Association, in its brief, states the issues as follows:

"Specific rules brought in issue are those which permit holding, storage or sacking-in-transit and reshipment of freight held at points on the Federal Barge Lines and later reshipped by rail to interstate destinations. For convenience of treatment evidence was directed in the main to the transit privileges governing the stopping-in-transit

and storage and reshipment of sugar moving through the ports of Memphis, Tenn., and Birmingham and Holt, Ala."

In explanation of the character of these practices at Memphis, the complainants state:

"The sugar arrives at Memphis on barges. These barges are placed at the river bank, and the sugar is loaded on four-wheel trucks, usually 15 sacks to the truck. These trucks are attached by a ratchet to an escalator which moves them up an incline to the floor level

of the transfer platforms and warehouses on top of the river bank. When they reach the top, four of the trucks are attached (tandem formation) to a tractor which hauls them either into the waiting railroad cars or into the warehouse for what defendant calls 'stopping.' Under the tariff the sugar may be 'stopped' up to 12 months and reshipped out at the balance of the through rate. The maximum distance from the escalator to the stock pile is 400 feet,

(Continued on page 11)

Inland Waterways Corporation Has About-Faced

Grim Humor
at Washington

By KENT B. STILES

WHEN Major General T. Q. Ashburn, chairman of the board of the Inland Waterways Corporation, addressed the Mississippi Valley Association at St. Louis on Nov. 24, he alluded to warehousing's charge that the Federally-owned Barge Lines are (to quote General Ashburn) "engaged in nefarious practices designed to put the warehousemen out of business," and he commented:

"It is to laugh, as the French say!"

Warehousemen who, after following closely this "free storage" controversy, read now the foregoing Washington despatch, will indeed discover an element of humor, notwithstanding the seriousness arising out of this case involving Government competition with private enterprise which has many thousands of dollars invested in established warehouses at river ports.

Let us see where the humor is to be found:

General Ashburn, in his annual report made public on April 8, 1930, expressed what was equivalent to a challenge to the American Warehousemen's Association to appeal to the Interstate Commerce Commission for relief.

"The warehousemen's association," to quote from General Ashburn's report, "through the efforts of a single individual, has propagandized Congress and the public in an endeavor to create the impression that the practices of this corporation re 'storage in transit' are harmful to the warehousemen and the railroads. *This is a matter which is properly justiciable by the Interstate Commerce Commission.*"

Note the significance of the italicized sentence—that the problem was, in General Ashburn's opinion, something for the Interstate Commerce Commission to decide.

Now read the sentence again in the light of the brief which counsel for General Ashburn filed with the Interstate Commerce Commission, in December, after the American Warehousemen's Association had met the General's challenge by formally filing a complaint with the Commission. In this brief filed on behalf of General Ashburn, we find the following:

"This proceeding presents no controversy within the jurisdiction of the Commission, primarily because complainant and this defendant do not stand, in respect to the matters in controversy, in

the relation of shipper and carrier."

In other words, the Inland Waterways Corporation, after stating in an annual report that the situation was justiciable by the Interstate Commerce Commission, now contends that the Interstate Commerce Commission is without jurisdiction in the case.

The Inland Waterways Corporation told the American Warehousemen's Association where to go for relief. The American Warehousemen's Association went. Now the Inland Waterways Corporation holds that relief cannot, legally, be obtained at that source.

So much for the humor—a grim species of facetiousness—attaching to a situation which permits a Government-owned agency to operate non-taxable terminals in rivalry with tax-paying privately-operated warehouse buildings.

Distribution and Warehousing said editorially last June:

"Presumably the practice of according free storage will be continued unless and until the I. C. C. forbids."

That suggestion was well based then and it applies today. Horace H. Herr says, in his foregoing Washington correspondence, that "considerable surprise and disappointment was expressed by transportation and warehousing interests that the Inland Waterways Corporation, in its brief, showed a disposition to plead the legal technicality rather than squarely meet the issues raised in the warehousemen's complaint." Unquestionably that will be the reaction of all those storage executives who have been in intimate touch with this problem.

What Next?

Probably early in February the Interstate Commerce Commission examiner, William A. Maidens, who presided at the Commission's hearing in the case at Memphis on Sept. 30, will issue his proposed report, and both sides will have opportunity to present their views before the Commission decides the case.

If the final decision is against the American Warehousemen's Association, what then?

Mr. Herr in his Washington correspondence says:

"In the event that the Interstate Commerce Commission should accept the defendant's view and hold that it had no

authority over storage charges of water carriers, or such charges when the storage is incidental to a water-rail haul, the remedy necessarily would be an appeal to Congress for some such legislation as already has been proposed by Representative John McDuffie of Alabama."

The McDuffie measure is proposed legislation which would either force the railroads out of the warehouse business or compel them to compete on a fair basis with public and private warehousing enterprises.

Warehousing's logical next step, then, in the event that the Interstate Commerce Commission's decision goes against it in the Barge Lines situation, would be an effort to have Congress legislate against the "free storage" practices of the Inland Waterways Corporation.

Directly in connection with such a possibility, it is pertinent to review at this point a part of the record of the proceedings of the Memphis hearing at which witnesses for both sides presented testimony and evidence before Examiner Maidens on Sept. 30.

Late in the afternoon, W. M. Huff, traffic manager of the Federal Barge Lines, was on the stand as the Inland Waterways Corporation's lone witness of the day. He was being questioned by C. R. Hillier, Chicago, an attorney representing the Savannah Sugar Refining Corporation. The following is quoted from the November issue of *Distribution and Warehousing*:

Mr. Hillier, on behalf of sugar interests, questioned Mr. Hough as to the figures the witness had cited covering Barge Line labor costs. The latter included nothing for insurance, taxes, depreciation, switching, and nothing for overhead, the witness admitted.

Mr. Hillier questioned Mr. Hough as to the costs of constructing the Birmingham and Holt terminals, saying: "I know you have a service that you are rendering on this sugar, and it costs you money, and regardless of what you may testify to here, I presume it is a fair conclusion that this service should be charged with its proper charge of these costs. My client is suffering because of it."

Mr. Belnap [Nuel B. Belnap, representing the Inland Waterways Corporation as counsel] injected the comment:

"I suggest that these gentlemen seek relief in Congress. The Commission has no power to fix minimum rates."

Summarizing, the Inland Waterways Corporation said the "free storage" situation was justiciable by the Interstate Commerce Commission. Now it is on record, with the Commission, contending that the Commission is without jurisdiction. At Memphis, counsel for the Inland Waterways Commission suggested that relief be sought in Congress.

Query:

If the Interstate Commerce Commis-

sion decides against warehousing and the American Warehousemen's Association is compelled to ask Congress for relief, will the Inland Waterways Corporation then contend that Congress is without jurisdiction?

President Hoover said, last Oct. 7:

"Government in business, except in emergency, is a destruction of equal opportunity and the incarnation of tyranny through bureaucracy."

There is no present national emergency which warrants Federal operation of the barge lines under a system which competes unfairly with private enter-

prise—and this statement will stand regardless of the character of the decision to be rendered by the Interstate Commerce Commission.

The United States Government has it within its power to end such competition. All that is necessary is for the War Department to instruct General Ashburn to quit it. By failing to issue such instructions, the War Department places burdensome expense on private enterprise by forcing warehousing, in its own protection, to carry on a legal battle before the I. C. C., and if necessary, eventually before Congress.

Federal Barge Lines Deny Interstate Commerce Commission Jurisdiction

(Continued from page 9)

the minimum 150 feet. The loading of the truck and the unloading from truck to 'stock pile' is performed by labor which is obtained at 30 cents per hour at Memphis. In other words, this sugar is taken from the barge to the so-called stock pile where, under the tariff, it is permitted to be 'stopped-in-transit' for a period up to 12 months awaiting re-shipment at the balance of the through rate.

"During this period the defendant stoutly maintains that the sugar is 'stopped' in transit and is not 'stored' in transit. At Cairo or Vicksburg, for example, the sugar also comes to a temporary halt, but there it is 'stored.' It must be perfectly obvious, therefore, that the only distinction between what happens at Cairo and Vicksburg, on the one hand, and Memphis, Birmingham and Holt, on the other hand, is that at the former ports the property leaves the custody of the Barge Line and goes into public warehouses, whereas at Memphis it is 'held in possession' of the Barge Line and goes into its leased warehouse. This we maintain is a distinction without a difference. This record shows that prior to Sept. 20, 1929, when defendant leased the Municipal River and Rail Terminal and when that terminal was operated by the city of Memphis, its tariff provided for 'storage' in transit in that building. After the defendant leased this facility, however, storage in exactly the same spot became 'stopping-in-transit.'"

Having submitted its evidence that the Barge Lines apply the terms 'stopping' and 'storage' to the same service to camouflage the fact that in one case it makes no charge or only a nominal charge, while in the other the shipper must pay a substantial storage charge, the complainants point out that the Barge Lines charge only 1 1/4 cents per 100 pounds, or 25 cents per ton, for stopping-in-transit at Memphis up to 60 days. It is submitted that this charge does not cover "the bare touch labor cost," to say nothing of overhead and storage costs.

Taking up the Barge Lines' contention that, while they pay \$72,000 a year for the Memphis terminal facilities, storage

does not cost them anything, the complainants observe:

"When the transaction is stripped of sham and subterfuge, it amounts to this:

"The Barge Line has leased a terminal large enough to warehouse 175,000 bags of sugar at one time, and is designating this warehouse space as freight 'terminal' so that it can avoid setting up any cost for the use of the warehouse against shippers and thus accord free storage."

The warehousemen charge that—

1. The defendant barge line is in reality according a storage service;
2. This service is accorded without charge, and
3. The practice is unlawful.

Decision Cited

They cite numerous Court decisions bearing on the proposition that a carrier may not charge less for a service than the performance of the service costs. The Interstate Commerce Commission's own finding in the case of the *American Paper & Pulp Association v. B. & O. R. R. Co.*, (41 I. C. C. 506) decided Nov. 6, 1916, is cited. At that time the Commission held:

"While recognizing the right of carriers to modify their rates under the necessity of competition, we have never conceded them a right to reduce their charges below the cost of the service for which the charge is made. Rates which are not in some degree compensatory necessarily discriminate in favor of the traffic transported under such rates and unduly prejudice other traffic which must make up the loss."

The warehousemen complainant insists that "in showing that the practice complained against bears most unfairly upon (a) public warehousemen who formerly enjoyed this storage business; (b) competing railroads; (c) shippers who cannot use the facilities of the Federal Barge Line, and (d) competing barge line companies, we have about exhausted the field of public interest."

In its brief and argument, the Inland Waterways Corporation admits that the cost of handling at Memphis is 40 cents per ton, while the charges at Memphis

for the stopping-in-transit service are 25 cents per ton for the first 60 days, 75 cents for 90 days, \$1.15 for 120 days, and up to a maximum of \$5.55 per ton for 12 months.

The Corporation argues that the Commission has no jurisdiction as the controversy is not between the barge line and a shipper.

"Complainant's own evidence," quoting from the Barge Lines' brief, "makes it plain that the Commission has no jurisdiction over this proceeding. There is no controversy here between a shipper and a carrier in respect of a transportation service rendered by the carrier for the shipper."

The brief shows that the Barge Lines offer shippers of sugar, for a period not to exceed one year, storage on the Barge Lines' premises at Memphis, Birmingham and Holt, assessing for the privilege so extended a graded basis of charges depending on the period of storage, the minimum being 25 cents a ton covering the first 60 days, or any part thereof.

It is frankly admitted that "the Barge Line maintains this storage privilege so that it may attract sugar to the barge-rail route." It is explained that originally, having terminal space available and the extra handling cost being small, the storage privilege was free for the first 60 days. Experience demonstrated that traffic would stand some additional charge, and, effective Aug. 10, 1930, the 25 cents per ton charge for the first 60 days was established.

According to the Barge Lines' brief:

"Because the Barge Line is getting the business and the commercial warehouse is not, this complaint was brought seeking to have the Commission issue an order which would require the Barge Line to increase its charges and incidentally burden barge-rail traffic to a place where the commercial warehouse would again have the business."

"The Commission and the Courts," according to the brief, "have repeatedly held that a carrier owes no duty except to those who stand in the relation of shipper with it and particularly a carrier owes no duty to conduct its own private business so as to make it more

profitable for some third person to carry on a competing business."

The Barge Lines contend that their charges for the storage privilege are, in fact, compensatory and cover the actual costs of the service. It is argued, also, that the Commission, under the Transportation Act, has no authority over minimum rates assessed in connection with water-and-rail transportation but that its authority ends with maximum rates.

With the briefs before the Commission, the next step in the proceedings is for the examiner to formulate his recommendations and issue his proposed report to the Commission. Complainant and respondent will have opportunity to express their views on these recommendations before final action on them by the Commission. It may be early in February, at least, before the examiner's proposed report is issued.

DISTRIBUTION AND WAREHOUSING'S Washington Bureau, 1163 National Press Building.

FURTHER evidence of an increasingly critical attitude toward the Inland Waterways Corporation on the part of Congress is to be found in the records of hearings on the War Department appropriation bill, introduced in the House on Jan. 5. The procedure in handling these appropriation bills is that the House Committee on Appropriations calls before it the heads of the several departments and asks them to explain the necessity for the appropriations sought, and the use to which the money will be put. If no appropriation is carried in the bill for a specific department, it is unusual to call in the head of that department for examination.

Although the Inland Waterways Corporation had an interest in none of the items in the appropriation bill, Major General T. Q. Ashburn, chairman of the board, was subjected to an extended examination on just where the Federal Barge Lines are getting, and what these operations actually have cost the national Government and, therefore, the taxpayers of the country.

The questions propounded to General Ashburn in several instances suggested that, even in the minds of those friendly to the great experiment in water transportation, there lurks a suspicion that too much enthusiasm and optimism have colored the official accounts of what these barge line activities have accomplished and what they have cost.

In the entire discussion, General Ashburn made no comment regarding the Inland Waterways Corporation policy as to storage-in-transit privileges which at several terminals have worked considerable confusion in the warehousing industry. The absence of comment on this subject is so conspicuous as to raise the question of whether or not the directing head of the barge lines intentionally steered away from a subject which has aroused considerable criticism.

Representatives Ross A. Collins, Democrat, of Mississippi, and John Taber, Republican, of New York, questioned

General Ashburn in some detail as to just what the financial history of the Inland Waterways Corporation shows. The record of the hearing is quoted herewith, that one may form his own conclusion as to the significance of the inquiries and the value of the facts developed.

Mr. Collins: "Let us get the picture as a whole, if we can. You have had, first, an appropriation of \$5,000,000?"

Gen. Ashburn: "Yes."

Mr. Collins: "You have been operating for a certain number of years. What is the value of your property on hand now? The total appropriation you had was \$15,000,000?"

Gen. Ashburn: "Yes. On Dec. 31, 1929, the total net worth was \$20,887,510.71."

Mr. Collins: "The total expenditures have amounted to \$15,000,000?"

Gen. Ashburn: "Of the \$15,000,000 we still have \$3,000,000 that has not been touched, and we have \$3,870,000 in the banks, so that out of the \$15,000,000 altogether appropriated we have close to \$7,000,000 that has not yet been spent."

Mr. Taber: "Is this value of the property the value arrived at after deducting the amount of depreciation, or is it the value before deducting the amount of depreciation?"

Gen. Ashburn: "This is the depreciated value."

Mr. Taber: "How much property did you take over that was not covered by appropriation?"

Gen. Ashburn: "When the corporation was organized we had the American Appraisal Co. of Milwaukee appraise our property and set their own value on it. That was about \$10,000,000, as appraised by the American Appraisal Co., although that carried in it such items as that for the 'Lohr'." (Gen. Ashburn had explained that although never able to use the boat "Lohr" it was carried on the books at a net value of \$51,969.) "Afterwards we acquired through Court action four tow boats and 19 barges valued at about \$1,756,000, and had donations, including my Army salary, of about \$490,000. We have operated on our net income. We take the depreciation and put that into the maintenance of the fleet, but we charge this depreciation against the operation of the fleet, although we have actually spent it in keeping the fleet going and in acquiring new equipment."

Mr. Taber: "There has been appro-

priated \$15,000,000, and the property was appraised at \$10,000,000?"

Gen. Ashburn: "Yes."

Mr. Taber: "That makes \$25,000,000. You have now on hand assets of \$20,000,000?"

Gen. Ashburn: "On Dec. 31, 1929, there was a value of \$20,887,510.71. In addition to that we have \$3,000,000 which has never been touched and is still in the Treasury."

Mr. Taber: "And the three million and odd dollars in the banks is not included in the \$20,000,000?"

Gen. Ashburn: "No; that is not included in that. That was of Dec. 31, 1929, you understand."

Mr. Taber: "You show, according to this statement, that you have given us net assets transferred by Public Statute 185, Sixty-eighth Congress, \$11,958,282.24; capital stock issued, \$9,000,000; donations, \$418,976.76, or a total of \$21,377,259.60. You show a profit-and-loss deficit of \$489,748.89, leaving a net worth of \$20,887,510.17. In addition to that you have cash in the Treasury amounting to \$3,000,000, which has not been touched, but which has been appropriated."

Gen. Ashburn: "Yes; and we also have in the banks \$3,772,700.87 as of Nov. 1, 1930, which is approximately \$2,000,000 more than we had on deposit at Dec. 31, 1929."

Mr. Taber: "At that time you did not have the cash that you have now?"

Gen. Ashburn: "Not all of it."

Mr. Taber: "So you really show a profit and loss deficit down to this date, Dec. 31, 1929, on your books, of \$489,748.89?"

Gen. Ashburn: "Exactly."

Mr. Taber: "That is the real picture, is it not?"

Gen. Ashburn: "Yes, it is the picture of profit and loss, but it is not the picture of operating income. * * * That is the loss shown under the heading 'profit-and-loss,' but it does not show that during the five years 1925-1929, inclusive, we have been operating our 'net operating income' has averaged \$81,000 a year more than we spent to operate."

Later during the hearing, the record shows the following:

Mr. Taber: "Of course, in figuring any of your profit and loss statement, and that sort of thing, you have not figured the interest on the money that has not been turned over to you at all; have you?"

Gen. Ashburn: "No."

Mr. Taber: "I like to see the people in the Middle West and the South get this barge service because I think it is a good thing. At the same time I think we make a great mistake if we try to make folks think that the condition is better than it is."

Gen. Ashburn: "Nobody wants to make them think it is better than it is. We want to give them an accurate picture of the facts. That is why we publish the much-discussed 'profit-and-loss' account, with proper analysis, which so many people do not take the trouble to read."

—George H. Manning.



Exit Drum and Enter Tank in Industrial Fluid Distribution

By
CARLETON CLEVELAND

Economy in Storage Effected Through Penick & Ford Plan in Cooperation with Currier-Lee Warehouse, Chicago

THE use of the steel storage tank represents another forward step in the handling of industrial fluids in the public warehouse. Such a plan has been worked out by the Penick & Ford Sales Co., Inc., Cedar Rapids, Iowa, in transporting, storing and distributing its corn syrup, unmixed, to the Chicago trade, through the Currier-Lee Warehouse Co., Chicago. This product is used very largely in the manufacture of confectionery, chewing gum, mixing syrups, preserves, jams and jellies, and numerous other lines of industry.

The syrup was formerly shipped to a large extent in 50-gallon steel drums weighing in the neighborhood of 750 pounds each. The drums had to be loaded on cars at Cedar Rapids; unloaded at a Chicago warehouse; stored until needed; then loaded on a truck and conveyed to user. After that the empty drums had to be collected, loaded on cars, and reshipped to the Penick & Ford plant at Cedar Rapids. As will be seen, this necessitated considerable handling, to say nothing of the added freight cost and a certain percentage of breakage or damage to the drums.

Lower Costs

With the installation of tank-cars, tank-trucks, and the necessary storage tank equipment, this product is now distributed with a minimum amount of handling and at a lower cost. In fact, at the Chicago distribution point—the Currier-Lee warehouse—only one man is required to handle the storing of the product. This man looks after the equipment used for pumping the corn syrup from the tank-car to the storage tanks and from the tanks to the tank-trucks

for distribution among the local trade.

The tank cars used in the railroad transportation of the corn syrup are of special construction, although similar in appearance to the cars used for the movement of petroleum products. The corn syrup is pumped into the tank-cars through a hose, or pipe connection, in the dome and is emptied through a pipeline opening at the bottom. These tank-cars are of steel construction, made to carry a capacity of 8,000 gallons. A coil along inside the bottom of each tank is used for the circulation of steam, necessary for liquifying the corn syrup, which becomes semi-solid under low temperatures.

Temperature

The steam used for this purpose is generated from a small, oil-heated boiler in the basement of the warehouse, and is conveyed by pipe-line to the tank car on the railroad siding above. The time required to empty a tank-car therefore depends on the outside temperature and the length of time necessary to get the syrup flowing freely. In spite of the fact that there is some gravity in the flow of the syrup from the tank-car to the storage tanks in the basement of the warehouse, it has been found necessary to use an air compressor to assist in forcing the syrup through the six-inch unloading pipe.

The four storage tanks located in the basement of the Currier-Lee warehouse are of sheet steel construction. Each has a capacity of 17,000 gallons, thus making a combined storage capacity of 68,000 gallons.

For distributing the product to the trade, tank-trucks of the tank-trailer

type are used, each tank being of steel construction with a capacity of about 27,000 pounds. A rotary pump is used to force the syrup from the storage tanks up into the tank-truck backed onto the platform scales in the covered concourse above. About eighteen minutes is required to fill the tank, a flow meter recording the temperature of the syrup and the length of time required to fill each tank, the scale at the same time recording the weight of the contents.

Each delivery truck is equipped with a pump, operated from the engine motor, which is used to force the syrup from the tank-truck into the customer's storage tank or steel drum, as the case may be. The driver of the truck handles the entire job.

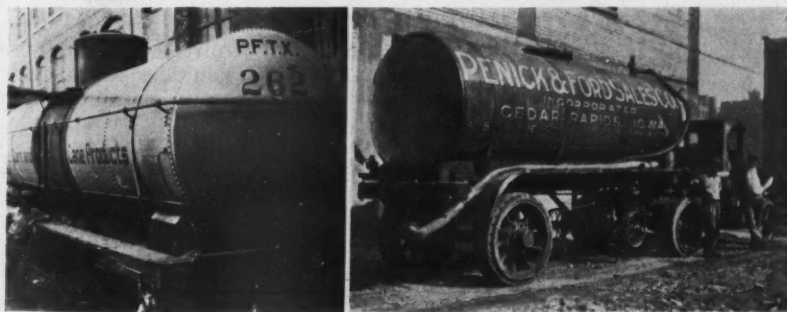
The advantage of handling industrial fluids by this storage tank method will be readily realized by any warehouseman called upon to meet a problem similar to that of Penick & Ford Sales Co., Inc. Physical handling is reduced to a minimum. Not only does this require less man power, thereby reducing the pay roll, but reducing handling always means a corresponding reduction in the number and severity of industrial accidents. Then, too, the investment in such an equipment naturally would induce a tenant to sign a lease for a longer period.

Inasmuch as the storage of those fluids falls within the classification of inflammables or explosives, both municipal and State regulations must be complied with. These regulations are generally of a technical nature, having to do with the construction of the tank and its location to nearby property. Not only do such problems come under the municipal code, but also under the scrutinizing eyes of fire insurance underwriters.

The warehouseman, therefore, who may contemplate the installation of storage tank equipment for the handling of industrial fluids, will do well to familiarize himself with the requirements set forth in the State, municipal and insurance regulations.

Truck Lines Incorporate

The Northern Indiana Truck Lines, Inc., has been incorporated, with a capital of \$3,000, to do a general cartage and dray business. The incorporators are Guy Pearson, John H. Shafer and Virgil B. Conrad.



Left—Tank car used by Penick & Ford in railroad transportation of car syrup.
Right—Tank truck used for delivery to the local trade

Features of N. F. W. A. Winter Convention

By
KENT B. STILES

SAN ANTONIO, Tex., Jan. 24—The outstanding features of the eleventh annual convention of the National Furniture Warehousemen's Association, held at the Hotel Gunter here from Tuesday to Saturday of this week, were as follows:

1. The association decided to place itself on record with the Interstate Commerce Commission in connection with the Commission's present inquiry into coordinated rail and truck transportation. Household goods warehousing's status as representative of motor truckers and motor common carriers will be outlined in a statement which, to be prepared by Henry Reimers, Chicago, executive secretary, will be presented at the final one of the Commission's hearings, at Washington on March 4. This statement is not expected either to advocate or to oppose Federal regulation, but will recite the industry's experience, as hauler of household goods, in relation to operation, licenses, certificates, taxes, tariffs, record-keeping, State legislation, State commission supervision, States' reciprocity, wages, costs, profits, etc. Prior to being submitted at Washington the statement will have the sanction of the National's board of directors.

2. The sentiment of the meeting favored a proposal, presented by C. J. Hamilton, Baltimore, as chairman of the association relations committee, that the National should change its constitution and by-laws so as to end the two-conventions-a-year system. Under this plan, which will be voted on at the winter meeting in 1932, only one national convention would be held each year, such meeting to take place probably in the winter time, while the summer would bring, if desirable, eastern, central, southern and western regional gatherings, all under the supervision of the N. F. W. A. Thus expenses would be lessened and the National would effect stronger and more intimate tie-up with local and State organizations. Meanwhile what may be the National's final summer convention will be held shortly after the middle of July at Mackinac Island, Mich., if Great Lakes boat transportation can be arranged satisfactorily.

3. The railroad traffic committee through its chairman, F. L. Bateman, Chicago, recommended that the subject of household good rates, as prescribed by the railroads, be taken up eventually with the Interstate Commerce Commission "with the view of inducing a favorable spread between the carload and less than carload rates." The committee urged that the association adopt the following general principles as a basis of action:

A. Promotion of a spread between C. L. and L. C. L. rates as long as present operating conditions continue.

B. Research and development of a standardized container unit for coordination of rail and highway processes of handling household goods.

C. Confirmation of the principle that railroad transportation is essential for handling shipments other than for short distances.

4. Martin H. Kennelly, Chicago, elected president, submitted a constructive program for action in the year ahead. This covers motor transportation; container service; consolidated cars; cooperative buying of materials; equipment, motor accessories and insurance; relationship between employer and employee; and the holding of national and regional conventions.

5. John J. Neeser, in a report submitted on his behalf as chairman of the insurance committee, stated that thirteen of the seventeen members of the committee had indorsed decision recommending that the association not adopt a proposed policy under which every lot entering storage would be automatically insured. The association voted approval of the Neeser report.

6. As chairman of the compensation division of the insurance committee, A. V. Cresto, Kansas City, suggested that the association retain "a learned, qualified insurance counsellor."

7. The report read on behalf of W. R. Thomas, Cleveland, as head of the committee on sale of unclaimed goods, together with ensuing discussion, indicated that in several of the States the uniform warehouse receipts Act had been disturbed. James F. Keenan, Pittsburgh, the association's retiring president, characterized this as a "backward movement."

8. Adaptability of trailers to container service was emphasized by George Thomas, of the Fruehauf Trailer Co., who announced that his organization was prepared to build a chassis, at economical cost, to handle containers, if the industry could standardize.

9. The code of practice committee announced through its chairman, Sidney S. David, Chicago, that it had suspended effort to place household goods warehousing within the purview of the Federal Trade Commission. The latter's rulings had become less elastic, Mr. David explained, and some of the industries were not as pleased as a year ago, and the committee believed that the N. F. W. A. should wait until the situation had become crystallized so that the association could know definitely what the Commission would both permit and expect the association to do in the event of a trade practice conference arrangement.

10. Suggestion that the board of directors consider the advisability of creating a committee on taxes was made in the report read on behalf of L. H. Tanner, Detroit, as head of the purchasing division of the committee on warehouse and removals operations. "The burden of taxation is getting to a point where it is almost impossible for the taxpayer to pay," he declared.

11. That price cutting had been rampant during the period of depression was conceded by various speakers and committee chairmen, who counselled the members to end this form of competition.

12. The board of directors elected eight companies to membership; reinstated three others; accepted the resigna-

tions of eight firms; dropped four companies from membership, and suspended one. Applications of twelve firms were either deferred or rejected. The directors voted to enforce drastically the by-laws provision which provides for suspension of members for failure to remit collections.

A more detailed report of these and other activities and reports will be published in the March issue of *Distribution and Warehousing*.

The Price of Survival

IN accepting the presidency, Mr. Kennelly paid a tribute to the work of all the past presidents—Charles S. Morris, F. L. Bateman, E. B. Gould, Schuyler C. Blackburn and James F. Keenan—and of the secretary, Ralph J. Wood, and the executive secretary, Henry Reimers, and outlined what, in his opinion, the warehousemen should do, individually and collectively, "to bring about the return of normal conditions." He asked:

"Are we depending upon others to bring about the change that we so much desire? Are we exempt in this crisis? Should it not be our duty to see what we can contribute to the economic condition of our country?"

Methods of doing business in all industries, and particularly in household goods warehousing, were undergoing rapid changes, Mr. Kennelly pointed out, and "adaptability is the price of survival."

Declaring that motor transportation was, for certain hauls and for certain conditions, economical rapid transportation and should be fostered and developed, Mr. Kennelly said:

"We should not, however, lose sight of the fact that the railroads, and their prosperity and success, are entwined into the very fabric of American business life, and that any attitude or any policy that the shippers of the country adopt, or that the Government itself adopts, on transportation, whether it be motor truck, or the development of the waterways, should always take into consideration the interests and well being of the railroads; and, on the other hand, the railroads should show a friendly interest in all forms of transportation beneficial to the shippers and the public.

"In other words, this business of transportation is so vital to the very life of this country that its continued success depends upon the mutual understanding of those engaged in this business of shipping and transportation.

"The long distance moving of household goods has grown, as we all know, to great proportions. The Allied Van Lines is in a position to study and develop this branch of our business. We are the leaders now, and we must keep this leadership. I have every confidence we will."

Containers

SHIPPING of household goods in containers over the rails for long distances would be developed by the N. F. W. A., Mr. Kennelly stated, continuing:

"Experimental work is now going on. We are going to ask the railroads to co-operate with us in the development of this service—the development of the proper equipment, and the proper adjustment of rate structure. Surely railroads should be able to carry merchandise on long hauls at a less cost than by individual operation of motor units."

Consolidation of household goods in pool cars to the Pacific Coast was being studied by a committee, Mr. Kennelly said, and conferences with the major for-

be purchased, and determine, by its study and control, what is best for the industry."

Employees

REAL and continued prosperity in this country will not exist, Mr. Kennelly declared, "until trade associations like ours, employing thousands of men, take it upon themselves, as a duty and as a part of their business program, to discuss ways and means of promoting the prosperity and happiness of their employees." Proposing to do this, he explained:

"It is generally recognized that the present abnormal condition of business is brought about by conditions outside of our own country and over which we have no control, and following this thought through to a conclusion it makes us realize that we cannot have prosperity in any industry unless all those engaged in the industry are proportionately sharing in the prosperity."

Indorsing the idea of one yearly meeting for the National, and summer gatherings of regional character, Mr. Kennelly said the annual convention "would be a review of the accomplishments of the local associations, with suggested thoughts for the future." He urged that local associations have meetings at least quarterly which would be executive sessions attended exclusively by companies' owners and high executives, as he had noticed that many such executives were not attending local association meetings to the extent formerly, but were sending their employees.

Mr. Kennelly suggested that the industry be departmentalized just as each individual business is departmentalized—storing, moving, packing, shipping. "A series of meetings should be devoted to each department," he said, "and even at conventions, sessions could be so divided." He concluded:

"I propose for your consideration, and the consideration of the directors and officers, making the Allied Van Lines' offices, or some of them at least, association offices which would cooperate with the local organizations. I suggest that round table meetings now being held separately from the local organizations be merged with the local association work. This will keep up the interest in local associations, which is important.

"The association offices could take on the work of cooperative buying and any other work which is now handled through the central office. It would be a decentralization of operations, which would strengthen the local associations and strengthen the National association and would help our entire membership. We must make the association activities so valuable that no one can afford not to belong or not to participate."

The Elections

OFFICERS and directors were elected by the N. F. W. A. at San Antonio as follows:

President, Martin H. Kennelly, president Werner Bros.-Kennelly Co., Chicago.

Eastern vice-president, William T. Bostwick, president Thomas J. Stewart Co., Inc., Jersey City and New York.

Southern vice-president, J. P. Ricks, president Ricks Storage Co., Inc., Jackson, Miss.

Central vice-president, Marion R. Niedringhaus, president General Warehousing Co., St. Louis.

Western vice-president, Harvey B. Lyon, secretary Lyon Storage & Moving Co., Inc., Oakland, Cal.

Secretary, Ralph J. Wood, president Lincoln Warehouse Corp., Chicago.

Treasurer, James D. Dunn, president Riverside Storage & Cartage Co., Detroit.

Directors, James F. Keenan, president Haugh & Keenan Storage & Transfer Co., Pittsburgh; John J. Woodside, Jr., president John J. Woodside Storage Co., Inc., Atlanta; Oscar W. Kreutzer, secretary United Fire Proof Warehouse Co., Inc., Milwaukee; F. L. Bateman, Chicago, president Trans-Continental Freight Co., Inc.

warding companies would be arranged as soon as possible to determine whether some plan may be worked out which would be of mutual advantage to warehouseman and forwarder.

Regarding cooperative buying, Mr. Kennelly pointed out that the industry was a large user of materials, motor accessories and equipment and also of insurance, and "surely this association could be of great benefit to its membership if it would develop a centralized purchasing of items upon which great savings could be effected." Not only would the saving be important, he said, "but it would enable us to standardize on the kind of materials that should be used, and the kind of insurance that should

When you ship goods to a fellow warehouseman—use the annual Warehouse Directory.

High Lights of A. W. A. Annual Convention

By
KENT B. STILES

ATLANTIC CITY, N. J., Jan. 31.—The two outstanding features of the fortieth annual convention of the American Warehousemen's Association, held at the Ambassador Hotel here with adjournment at noon today after four days of discussion and constructive action, were these:

First, the association voted to call to the attention of the Interstate Commerce Commission "the apparent tendency of the rail carriers to enter into competition with each other in providing terminal merchandise and cold storage warehouses regardless of existing facilities," and to ask the Commission to investigate this situation.

Earlier in the week Charles E. Cotterill, of A. W. A. counsel, had told the merchandise division members that the railroads now had an exaggerated investment in storage facilities nearly equaling the investment of public warehouse companies. Mr. Cotterill warned the warehousemen operating in the inland cities that the railroad practice would, unless checked, spread from the Atlantic ports to the interior, and he advised that warehousing as an industry clarify its status as an institution operating in interstate commerce.

Second, the cold storage division voted to function in future as a separate organization. This will be done in

one of two ways. The American Institute of Refrigeration will be approached to ascertain whether a satisfactory merger can be effected between cold storage warehousing and the Institute. If such an arrangement cannot be satisfactorily consummated, a new "Association of Refrigerated Warehouses" will be formed by the cold storage executives. In either event, cooperation with the American Warehousemen's Association—which will then comprise merchandise storage companies only—will be established and carried on by means of joint councils.

The action by the cold storage division was taken by approving a resolution brought in by a special committee—headed by Nelson A. Emmertz, Chicago—which had been appointed in response to a petition presented by about twenty division members who believed that a closer contact with the technical, Governmental and international aspects represented by the American Institute of Refrigeration "would seem highly desirable."

Other high lights of the convention, which was one of the most constructive assemblies in the association's four decades of history, and which will be reported more in detail in the March issue of *Distribution and Warehousing*, were as follows:

1. ELMER ERICKSON, vice-president of the Midland Warehouse & Transfer Co., Chicago, was elected general president, succeeding Harry C. Herschman, St. Joseph, Mo. Fred R. Long, manager of the S. N. Long Warehouse, St. Louis, was reelected president of the merchandise division, and V. O. Appel, operating executive of the Fulton Market Cold Storage Co., Chicago, was chosen president of the Cold Storage Division, succeeding the late Odin C. Mackay, Boston. Edward Wuichet, president of the Union Storage Co., Dayton, Ohio, was reelected president of the American Chain of Warehouses. E. V. D. Sullivan, president of the Terminal Warehouse Co., Philadelphia, was again chosen president of Distribution Service, Inc.

2. Robert H. Bean, executive secretary of the American Acceptance Council, New York, told the association that developments in warehousing were being watched with keen interest by bankers and that continuation of its present policies would command the respect of banking and business authorities and would further establish warehousing "as a most important factor in American commerce." Mr. Bean urged that warehousemen confine their activities to the

"Spot News"

ON these two pages is presented a summary of the outstanding developments of the fortieth annual convention of the American Warehousemen's Association at Atlantic City, N. J., on Jan. 28-31. Publication of this February issue was purposely delayed so that this brief review might be offered readers within a short time after the session adjourned.

A more comprehensive report of the discussions, papers and action will appear in the March number of *Distribution and Warehousing*.

business of warehousing and not attempt to be both bankers and warehousemen.

3. Reporting as a member of President Hoover's National Business Survey Conference, Mr. Erickson expressed opinion that warehousing's 1930 compared favorably with 1928; and while the final

quarter of 1930 apparently did not, he said, measure up to the first three quarters, there had been an up-turn in January of 1931 and the general feeling in the industry appeared to be that normalcy should be approached by next July.

4. Announcement was made by Chester B. Carruth, Chicago, the merchandise division's statistician, that the division had decided to defer petitioning the Federal Trade Commission for a code collateral with that of the cold storage industry "owing to the present status of the Federal Trade Conference plan."

5. Mr. Carruth's report on "These New Terminal Projects" showed that the A. W. A. had within the past year been instrumental in blocking such projects in many parts of the country by convincing banking interests that certain investments along that line would not be sound.

6. Discussion at the merchandise division sessions showed that motor freight line competition continued to be a menace to established warehousing but that individual groups of storage companies were in some sections of the country successfully combatting this encroachment.

7. A bill prepared by A. V. Mason, Milwaukee, which was proposed to be

The Elections at the Atlantic City Conventions in January Resulted as Follows:

A. W. A. General

President, Elmer Erickson, vice-president Midland Warehouse & Transfer Co., Chicago.
Vice-President, Frank A. Horne, president Merchants Refrigerating Co., New York City.
Treasurer, David H. Van Name, president F. C. Linde Co., New York City.
E. A. Howard Baker, president Kennicott-Patterson Warehouse Corp., Denver, continues as general secretary.

A. W. A. Merchandise Division

President, Fred R. Long, manager S. N. Long Warehouse, St. Louis.
Vice-President, S. G. Spear, treasurer Wiggin Terminals, Inc., Boston.
Treasurer, H. D. Crooks, owner Crooks Terminal Warehouses, Chicago.
Wilson V. Little, Chicago, continues as executive secretary.
Executive Committee members, D. S. Adams, president Adams Transfer & Storage Co., Kansas City, Mo.; E. H. Bacon, vice-president Louisville Public Warehouse Co., Inc., Louisville; James C. Brown, treasurer Camden Warehouses, Baltimore.

A. W. A. Cold Storage Division

President, V. O. Appel, operating executive Fulton Market Cold Storage Co., Chicago.
Vice-President, Ralph C. Stokell, general manager National Cold Storage Co., Inc., New York City.
Treasurer, George D. Liles, manager Terminals & Transportation Corporation of America, Buffalo, N. Y.
W. M. O'Keefe, Chicago, continues as executive secretary.
Executive Committee members, E. G. Erickson, vice-president Central Cold Storage Co., Chicago; W. D. Voelker, president Tulsa Cold Storage Co., Tulsa, Okla.; William J. Rushton, vice-president Birmingham Ice &

Cold Storage Co., Birmingham, Ala.; William B. Mason, vice-president Merchants Cold Storage & Warehouse Co., Providence, R. I.; Harold L. Brown, president Detroit Harbor Terminals Co., Detroit.

American Chain of Warehouses

President, Edward Wuichet, president Union Storage Co., Dayton, Ohio.
Chairman of Board, Alton H. Greeley, president General Storage Co., Cleveland.
Treasurer, David H. Van Name, president F. C. Linde Co., New York City.
Secretary, O. V. Hukill, New York City.
Directors, Mr. Wuichet, Mr. Greeley, Mr. Van Name and S. M. Haslett, president Haslett Warehouse Co., San Francisco; Willard W. Morse, president Security Warehouse Co., Minneapolis; John L. Newbold, president Merchants Transfer & Storage Co., Washington, D. C.; Elmer Erickson, vice-president Midland Warehouse & Transfer Co., Chicago; D. S. Adams, president Adams Transfer & Storage Co., Kansas City, Mo.; R. V. Dietrich, president Dietrich & Wiltz, Inc., New Orleans.

Distribution Service, Inc.

President, E. V. D. Sullivan, president Terminal Warehouse Co., Philadelphia.
Vice-President, W. A. Sammis, secretary Central Storage Co., Kansas City, Mo.
Treasurer, J. Edgar Lee, president Currier-Lee Warehouse Co., Chicago.
Secretary, A. J. Walker, Chicago.
Directors: Mr. Sullivan, Mr. Sammis and S. C. Blackiston, vice-president Bush Terminal Co., New York City; Henry F. Hiller, president San Francisco Warehouse Co., San Francisco; Frank F. Powell, president Henry Coburn Storage & Warehouse Co., Indianapolis; S. G. Sear, treasurer Wiggin Terminals, Inc., Boston; R. V. Weicker, president Weicker Transfer & Storage Co., Denver.

introduced in Congress, calling for Federal regulation of cold storage and merchandise warehouses, was presented to the cold storage division on behalf of Mr. Mason, absent because of illness. Majority discussion opposed the measure and action was deferred. In the merchandise division a suggestion drawn from the "question box" proposed a Federal law to regulate warehousing. By vote this was referred to the division's executive committee for consideration.

8. Announcement was made of the organizing of the Railroad Warehouse Association, members of which must first be members of the A. W. A. Robert L. Spencer, Pittsburgh, of the Pennsylvania Railroad warehouse system, was elected the new association's president.

9. In the cold storage division it was brought out in discussion that excessive loans, particularly on eggs in storage, by warehousemen to their customers resulted in unusually heavy losses in 1930, the warehousemen being left holding the bag when prices collapsed on some commodities. Speakers condemned excessive loans, and it was indicated that warehousemen would be more conservative in 1931.

10. The cold storage division authorized its executive committee to request the Department of Agriculture to com-

pile occupancy reports similar to the monthly ones now gathered by the Department of Commerce for merchandise warehousing.

11. The merchandise division authorized creation of a committee of seven to work with the National Furniture Warehousemen's Association in an effort to effect a wider spread between carload and less than carload railroad freight rates. H. B. Whipple, traffic manager of the New York Dock Co., New York, was made chairman of this committee.

12. In the merchandise division it was voted to authorize the committee on bonded warehouses "to investigate the institution of Class 2 (importers' private) warehouses, and to direct efforts on behalf of this association to restrict . . . these warehouses to that use which arises of commercial necessity, such as the availability of Class 3 warehouse space." Also the committee was authorized to assist local associations and individual members "who suffer from competition of Class 2, or Class 3, bonded warehouses operated with part time store keepers."

13. Based on a resolution earlier adopted in the cold storage division sessions, the association adopted a memorial that the industry work to effect closer relationship and better mutual

understanding between bankers and warehousemen.

14. It was voted to continue study of costs, "as a full knowledge of all our costs is the only sound basis for the conduct of our business." This action was based on a cold storage division resolution to the same effect.

15. Another resolution adopted, based on cold storage division action, called for commendation and support of "all research work being done by various bureaus and agencies in matters relating directly or indirectly to the warehousing business in all its branches."

16. The merchandise division's national advertising campaign was declared by D. S. Adams, Kansas City, chairman of the committee handling it, to be functioning advantageously and with benefit to the industry, with the past year having shown an increase in the number of investor-members.

17. The merchandise division voted in favor of the appointment of a special committee to prepare a code of ethics for adoption later.

18. President Long of the merchandise division announced that the division's debt had been paid and that a 1931 schedule was being worked out which should bring about a 30 per cent reduction in the dues of the members.

Production Surplus of 1929 Now Largely Liquidated

*We Are Now on the Way
Back to Normal*

By JOHN H. VAN DEVENTER

Industrial Consultant, United Business Publishers, Inc.

ONCE upon a time there was a little boy who made up his mind to do a real job of Christmas celebrating. He started early Christmas morning, before anyone else was awake and ate up all of the nuts, candies and oranges that are usually found in a juvenile stocking on such occasions. Next he crept downstairs and made a complete clean-up of the candy canes which adorned the tree. Later on he had sausages for breakfast, turkey with stuffing for dinner, plum pudding for supper, and an elegant sufficiency of hard and soft candies in the between meals interims.

Next day the little chap did not have any appetite, so his worried mother sent for the family doctor. This wise old gentleman had been busily making his post-Christmas round of calls on similar cases, so it did not take him long to make a diagnosis. A little poking and prodding told him the story and the handing out of a few harmless pink pills followed, in con-

sequence. "Don't worry about Johnny," he said to the mother, "he will get his appetite back in a few days."

American Business set out to have a grand old time in 1929. For four and a half years, from the middle of 1924 to the end of 1928, it had proceeded with more regularity, over a longer period, than ever before. So much so, indeed, that many business doctors declared that regularization had really been attained and that the business cycle had been eliminated.

Perhaps it would have been, had we been wise enough to let well enough alone and keep on consuming and producing at the rate of increase which characterized this long four-and-a-half-year period. But this smooth going must have given American Business the idea that it had a depression-proof stomach capable of unlimited consumption. So it started out, in 1929 as I said, to satisfy its appetite, in a big way.

HERE are some of the big chunks that American Business tried to swallow during its gorging period of the first nine months of 1929, as compared with its fairly conservative diet during the same months of 1928. As you read these figures representing its 1929 menu, keep in mind the fact that for the four years previously the annual rate of increase of manufacturing production did not average more than 2½ per cent per annum for industry as a whole.

A 12 per cent increase in the cotton crop.

A 14 per cent increase in finished cotton fabrics.

A 29 per cent increase in iron ore.

A 17 per cent increase in pig iron production.

A 43 per cent increase in electric hoists.

A 100 per cent increase in overhead electric cranes.

A 19 per cent increase in smelted copper.

A 20 per cent increase in tin deliveries.

An 11 per cent increase in electric motors.

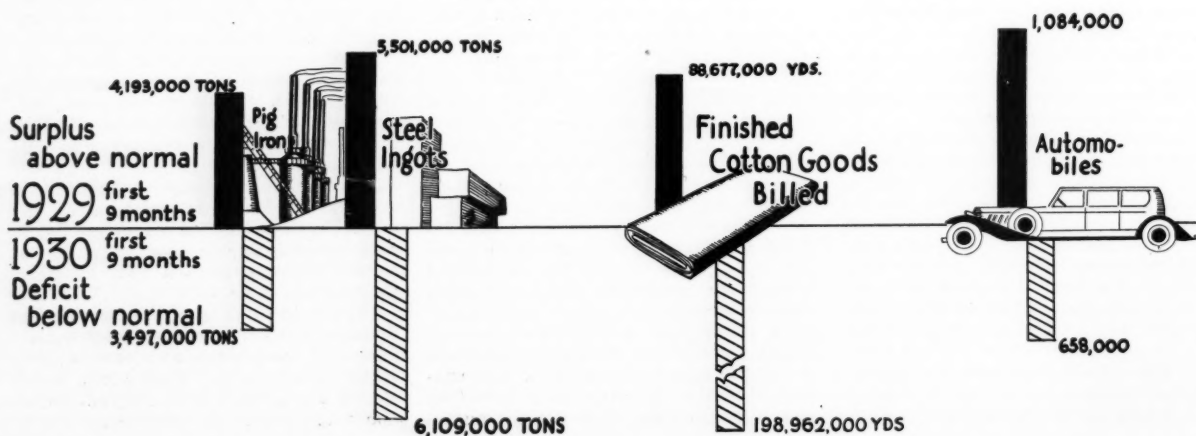
A 33 per cent increase in automobiles.

A 59 per cent increase in coke production.

An 18 per cent increase in paper board boxes.

An 18 per cent increase in household furniture.

A 25 per cent increase in New York bank debits.



A 95 per cent increase in new capital corporation securities.

Only One Cure

These are but a few of the many hundreds of similar increases which resulted, as any one might expect, in the economic indigestion from which we have been convalescing.

There is only one cure for this sort of stuffing, and that is a long period of light diet, such as we have been experiencing. Averages must be maintained, and surpluses of produc-

tion over normal needs must be followed by corrective deficits under normal.

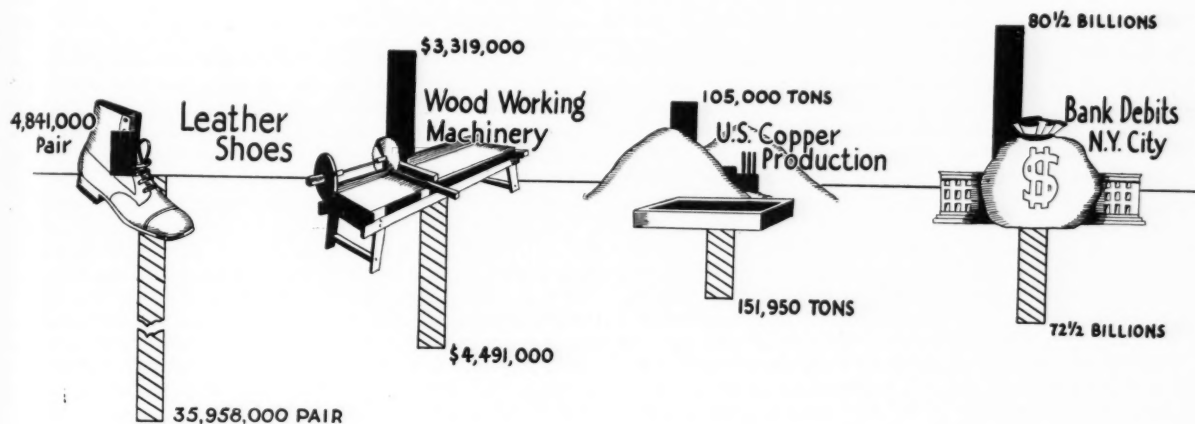
How much longer must we remain on this strict consumption diet? The charts at the foot of one of these pages will help to answer this question. According to them, we are pretty nearly ready for normal feeding. They are made to show how the deficits in production and other movements, below normal in 1930 have substantially wiped out the excesses, above normal, of 1929, normalcy being considered, in

this case, as defined by the projection of the average rate of progress of our manufacturing production from 1924 to 1928, inclusive. The deficits in consumption during the past year of 1930 have practically balanced the excesses of 1929.

Initiative

Business will not have to be spoon fed much longer. But it cannot expect to stay in bed and have full meals brought to it. It must exert itself to come down to the table and get them.

Have We Cleaned Up Our Production Surplus?



		1928	1929	1930
U. S. Pig Iron Production, in Tons	Actual	27,792,000	32,680,000	25,702,000
	Projected Normal.....		28,487,000	29,199,000
			+4,193,000	-3,497,000
Steel Ingot Production, Tons	Actual	36,930,000	43,354,000	32,689,000
	Projected Normal.....		37,853,000	38,798,000
			+5,501,000	-6,109,000
Finished Cotton Goods, Billings, Yards	Actual	655,447,000	750,510,000	489,666,000
	Projected Normal.....		671,832,000	688,628,000
			+88,677,000	-198,962,000
Automobiles Produced in U. S.	Actual	3,470,000	4,641,000	2,988,000
	Projected Normal.....		3,557,000	3,646,000
			+1,084,000	-658,000
Leather Shoes, Pairs Produced	Actual	262,607,000	274,013,000	239,943,000
	Projected Normal.....		269,172,000	275,901,000
			+4,841,000	-35,958,000
Woodworking Machinery Shipments, in Dollars	Actual	11,695,000	15,306,000	7,796,000
	Projected Normal.....		11,987,000	12,287,000
			+3,319,000	-4,491,000
Copper Produced in U. S., Tons	Actual	651,612	772,922	532,650
	Projected Normal.....		667,902	684,599
			+105,020	-151,949
Bank Debits New York City, in Dollars	Actual	356,825,000,000	446,309,000,000	302,368,000,000
	Projected Normal.....		365,736,000,000	374,879,000,000
			+80,573,000,000	-72,511,000,000

Above based on data presented in "Survey of Current Business" Number 111, November, 1930, published by U. S. Department of Commerce.

THE average increase in Combined Production over the four year period of normal business preceding the inflation period of 1929, was 2½ per cent per annum. This is due to the population increase, averaging 1½ per cent plus a one per cent increase per annum in general purchasing power. Certainly this is a very conservative basis, since it anticipates a doubling of per capita wealth only every 72 years. (On past performance the U. S. has doubled per capita wealth in less than half this period.)

Assuming that, as a manufacturing nation, our wealth growth, in general, cannot exceed the rate of growth of our manufacturing production, and that the 2½ per cent normal increase (compounded) affords a measure of expectable and maintainable progress, we may apply this measure to 1929 and 1930, to see how far we have gone toward correcting the production excess causing this depression.

This is done by taking the cumulative totals, in various lines of business and industrial activity, for the first nine months of 1928, 1929 and 1930 (latest available information in the November, 1930 Survey of Current Business), and comparing the actual performance in 1929 and 1930 with the normal as projected forward from 1928 on the basis of a 2½ per cent compounded annual increase.

The results of these comparisons of production surplus and deficit, roughly but forcefully indicate that we have about cleaned up the abnormal production surpluses of 1929. This is especially true if we keep in mind the fact that our cumulative totals represent but the first nine months of the three years in question, and that while data are not yet available, we know that the last three months of the present year have extended the correction.

DISTRIBUTION

Its Economic Relation
to Public Warehousing

Number 71

The Unit Carload. The Importance of Properly Packing the Car Is Quite as Great as Properly Packing the Container

By H. A. HARING

ENGINEERING studies of packing have greatly changed the design of containers for shipping goods. We have learned that a thinner packing case, and one weighing less and costing less, may protect the contents better than the old ox-cart crate of monolith pattern.

Improvement has become possible because we of today better understand the laws of physics than our fathers did. We have laboratories where in one week we may test packing more thoroughly than could be done in a year of shipping. Our scientists understand how to balance material and trussing against shock and ponderous masses; they have showed us that a paper carton makes a better box than two-inch timbers.

A generation ago we shipped lamp chimneys in immense hogsheads, which held twice as much bulk of excelsior as of chimneys; we packed eggs in sawdust that quickly became rancid. Today we pack chimneys in thin cartons with hanging pads and we ship eggs in crates so thin that the phrase "egg crate" has become synonymous with "almost nothing at all."

These advances have come because we understand how to meet impact with cushion; how to balance and suspend the contents against rough handling.

It has been our thought in packing the container that it shall be able to withstand all knocks that come; that it shall be pilferage proof and hold its own against railroad jolts, however severe. We have taken for granted that the transportation companies would do their worst to it.

THE railroads have a regulation which forbids the shipper to lag-screw the contents to the floor of the boxcar. Few shippers know of this rule. Fewer still ever think of observing it. Everyone does it. Heavy machinery is bolted to the floor, or, when a car is loaded with a single piece or with one or two which do not fill it tightly, timbers and cleats are spiked to the floor and sides. The attempt is to fasten the contents so rigidly to the car that no jolt, however sharp, shall move the goods. The thought is that so long as the piece is prevented from moving within the car it will not break.

Alas! Such shipments often arrive at destination broken.

One of the principal electrical manufacturers had trouble with porcelain electric insulators and large pieces of electrical equipment. The high voltage in-

ulators were carefully packed in crates but in unloading every carload some pieces would be broken. Another maker of heavy machinery had machine after machine break, although each had been crated in heavy timbers.

Freight claims resulted in long fights. The carriers blamed the damage upon "concealed defects" or imperfect castings or faulty crating.

One instance was that of a cotton gin. Its ends are cast-iron and carry two large shafts, the full length of the gin, with heavy, rigidly attached parts. The crates were built with heavy frame members, securely reinforced with 2 x 4 diagonal braces and many cross-ties. The whole crate was then sheathed with tongue-and-grooved lumber an inch thick. All joints were securely spiked and then the container well strapped with wire or steel bands. Within the crate the gin

And we have been right. A few inspections of railroad merchandise cars as they are broken open for unloading tell the story. Everything is tumbled about within the car as though a small earthquake had rattled the contents about. However nicely the lading may have been tiered and the lots separated, all is now confusion. The jars and shocks of road handling are revealed inside the car.

Indeed the interior of a railroad car is a perfect illustration of the thing we have mentioned. Packing is a matter of understanding how to resist impact. The railroad car itself is rigid. Its steel underframe does not yield the tiniest fraction to shock. Every vibration is transmitted to the packages within the car. When the car gets a jolt the load moves inside, much as a driver may be catapulted through his windshield when the automobile strikes a post. The vehicle is held firm. It can not move. Therefore the contents—the passenger in this instance—does move. In a similar manner, the freight within the car receives the impact of any shock given to the car itself.

Scientific packing has solved this difficulty. Hit-and-miss methods never did anything about it, because a thorough understanding of the laws of motion and physics is necessary to meet the situation. The slow ways of trial and error—of the "practical" man—lack the certainty of the laboratory.

Scientific packing attacked the problem: "How to pack the railroad car as we do the container—to protect the contents against everything."

was firmly bolted to the timbers and blocked between the ends and sides. The top fitted close to the machine.

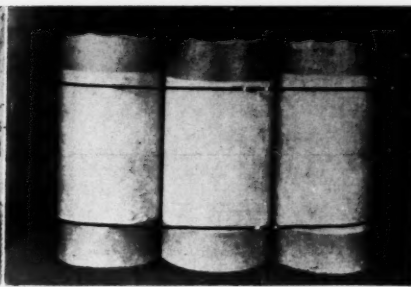
One would think that this packing would be proof against anything. It sounds as solid as "cast iron."

Something Must Give

YET we know that when a heavy shock comes to such a shipment something must give way. It did. The cotton gins broke—sometimes through the heaviest part of the base, more often at the bearings of the large shafts, occasionally the shafts themselves would split.

The mistake was one that anyone can understand today.

The crate was so rigid that it would permit no distortion. It was too rigid. Then, when lagged to the car floor and cleated to the car ends, the distortion



Some examples of unit carloading. Left—These barrels are braced with 20 pounds of unit-load band, and are safer than if 200 pounds of expensive timber had been used. Center—A unit of light gage sheets weighing 20,000 pounds. Right—Imagine what it would cost adequately to brace these heavy rolls of newsprint paper with wood; unit-load does it for less than \$2 for labor and material

and shocks of transportation were transmitted directly to the machine within the crate. The railroad car, with a steel underframe, could not give; the rigid crating was too strong for flexing under the strain; the interior packing made no provision for cushioning the shock. Nothing remained but the machine to suffer the impact. Therefore some part of the machine gave way. Severe bending or a sudden thrust of several tons were plunged on the shafting. Even cast steel will not withstand such jars.

It is impossible, as a matter of fact, to build a crate that is as rigid as cast iron, because wood itself yields to some extent and there will always be some looseness at a spiked joint. Consequently when even the best of crates suffers a shock, both the crate and its contents are more or less skewed diagonally and distorted. This is a necessary outcome, because the machine and the crate are securely bolted together, and, in all probability, firmly cleated or lagged to the car floor. The distortion is then carried to the contents. The machine will be twisted within the crate, and either the ends will break or the cast steel legs come off or such portions as porcelain insulators will crack.

To overcome the difficulty is not a problem of designing a more rigid crate. It is necessary to block the machine within the crate and to give the crate cushioning qualities so that a shock will be absorbed by the crating and not transmitted to the machine. For one thing, such machines are no longer bolted to the crates. They are allowed slight "play" and blocking substituted to limit the extent of the play.

And, when loaded into the railroad car, provision is made to take up the shocks of transportation in such a manner that they will not reach the crate's contents.

Withstanding Shock

A STRAND of the familiar excelsior is not even as strong as shavings. It is but a slender filament of wood, shaved off of popple or some other worthless timber. But, two strands of excelsior do not lie down smoothly together as two toothpicks would. No, excelsior is curled. Two strands thrown down will occupy the space of about

forty thicknesses of the same material if it were straight and smooth. Multiply the strands into a handful, wrap a fragile article within, and the most delicate glassware or X-ray tube or filament lamp may be thrown across the room or tramped upon, without the least danger.

The excelsior, light and fluffy and weighing next to nothing, by its very lightness becomes a cushion.

The scientist's statement of the principles of withstanding a shock read rather formidably. Yet they are here given.

A shipper owes it to himself, however, to read through the following paragraph carefully and repeat the reading until he grasps the thought. Ever afterwards he will know the whole of how to meet shocks in packing.

The principle is:

Protection against shock is essentially the problem of bringing to rest a body that is in motion. To do this involves two factors:

1. The force exerted, and
2. The distance through which this force acts.

Thus, if considerable distance is available for stopping a moving body, it can be brought to rest by a small force, while if it must be stopped in a short distance a large force must be applied.

To stop a motor car in ten feet requires quite different braking from stopping the same car in one hundred feet. This is further illustrated, in packing goods, by the use of thick pads of soft materials for packing very delicate articles and the use of comparatively thin pads of more rigid materials for packing articles which can themselves withstand greater stress. In the first case, the shock is absorbed by a small force (such as excelsior, sawdust, tissue paper, cotton) acting through a long distance; in the second, a larger force (such as corrugated pads, coiled springs, plywood, fibreboard) acts through a shorter distance.

The purpose of all packing materials is to increase the distance through which the force of the shock can act. This is the reason why a thinner packing case, properly designed, carries better than a case built of inch planks. Fragile commodities shipped in heavy, rigid con-

tainers require greater springiness in the interior packing than when light, flexible containers are used. This is because the rigid container cannot itself absorb the shock. It transmits all of the impact to the packing materials, whereas the flexible container dissipates a shock by springing and flexing itself and distorting its own shape.

Packing becomes, therefore, skill in distributing the stresses of handling and of absorbing shocks by cushioning. "Distribute" the stress so that not all of it comes at one point on the goods; "absorb" the shock so that none of it is taken up by the goods.

Remember that ever so slight a blow on a man's brain is fatal. The skull is so constructed, with all its intertwined soft joints which the anatomist calls "sutures," that the brain suffers nothing although a man's head gets a bump nearly every day that would kill him if transmitted directly to his brain. And, in his abdomen, are forty or fifty feet of thin membranous tissues each so thin that you could see through them, yet so perfectly protected that they last seventy and more years. The softness and flabbiness of the body absorbs all the shocks and strains, without carrying them through to the intestines. Were it not for this cushioning, so little a strain as bending over a chair would bring death! If they were rigidly held, the flop of your breakfast within the stomach when you shovel coal into the furnace would tear the stomach asunder!

As a man walks through a packing and shipping room he has, within his own body, all he needs know about packing goods to ship.

And the Carload

THE railroad car is nothing but an immense shipping container. It carries 20 to 50 tons instead of a few hundred pounds. Lading the car for safe arrival is nothing but packing the box on a magnified scale. Identically the same principles of distributing the stress and absorbing the shock govern best methods.

No one would think of putting eggs loose in a crate, or of china haphazardly stuck into a barrel, even of heavy office desks in a crate without soft padding. To do so would be ridiculously crazy,

DISTRIBUTION

Its Economic Relation to Public Warehousing

because any child knows that breakage and chipping and scratching will follow. Yet, ever since railroading began one hundred years ago along the Atlantic seaboard, Americans have put boxes into boxcar loose. We have known for a certainty that a jolt of the freight train might throw the box 34 feet from end to end of the car or might drop it eight feet from ceiling to floor.

Only recently have we applied the principles of withstanding a shock to our containers that carry from 20 to 50 tons. Some 600 of our best shippers have, however, now come to it.

A manufacturer of chemicals, shipped on glass carboys, experimented with 57 carloads and discovered that, at last, he had learned how to ship without breakage. One of the meat packers learned "this system of loading cars is entirely foolproof," and at once took steps to follow the new system for all his plants. Even the railroads are adopting the new principle for their merchandise cars. One of them reports that damage to L.C.L. freight is reduced 75% and that "the method cannot be improved; it is the most efficient method we have ever found."

Six hundred loaders of carload freight have been able to eliminate practically all damage to carload shipments, with infinite satisfaction to consignees. At last a solution to the shippers' most difficult problem seems to have been found.

The "Unit Carload"

FOR want of a better term this form of carloading is known as the "unit load."

The principle is that of distributing the stress and absorbing the shock by cushioning the packages within the carload. A number of barrels or rolls or boxes or crates, or anything for that matter, are bound together within the boxcar. This device enables them to slide as a unit on the floor of the car. Instead of the jolt knocking the barrel at the car-end against the next and that one passing on the shock to the next, and each suffering "internally," the entire half-end of the carload is bound together. It moves as a unit.

Here we have the principle that "a shock is absorbed by a small force acting through a long distance." The same impact that would crush the end container in the boxcar is now transmitted to a great mass of containers, half as long as the boxcar and as wide as the inside measurement. What would have crushed one container hardly is felt by any single container in such a bulk.

The individual containers, thus bound firmly together, tattle over slightly against each other or rub against each other. There is also the friction of the entire mass rubbing against the floor of

the car. Thus part of the shock is distributed by the containers rubbing against each other and part by the mass sliding on the car floor. But—little or none of the shock is transmitted to the contents of the containers.

The principle sounds simple. It is.

Kohler has adopted it for enamelware. The paper mills are enthusiastic over it for rolls of newsprint and equally for sheet paper in those awful 500-pound cases as well as on one-trip skids. Coca-Cola uses it. The makers of carbide and black powder in cans like it. The steel mills use it for strips and sheets; the tin plate makers for plate in cases. Bendix brakes have adopted it. Continental Motors for automobile engines, several makers of gas and electric stoves in crates, have welcomed it. And, by no means least, the railroads are adopting it for their merchandise cars.

The illustrations accompanying this article show some of the uses of unit car loading. In order further to indicate how widely it is available, the following commodities are listed as among those which have benefited:

- Automobile motors.
- Bales of anything.
- Barrels of anything, either "tight" or "slack."
- Bath tubs in crates.
- Batteries.
- Battery boxes.
- Boxboard and fibreboard in rolls.
- Cans, empty.
- Corrugated sheet metal.
- Clutches for automobiles.
- Crates of anything.
- Culverts of any material.
- Cylinders of anything.
- China and glassware.
- Drums of anything, either filled or empty.
- Enamelware.
- Furniture.
- Grave vaults.
- Linoleum, either in rolls or crates.
- Machinery.
- Marble.
- Motors of any sort.
- Pails and similar containers.
- Paper, either rolls or on skid platforms.
- Pipe.
- Pumps of any sort.
- Roofing.
- Radiators.
- Reels.
- Railroad supplies on skids.
- Sheet steel.
- Shingles.
- Strip steel.
- Stoves of any sort.
- Tanks and small boilers.
- Terne plates.
- Tile.
- Tin plate, either in boxes or packs.
- Transformers.
- Washing machines.

Loading

THE containers which become a "unit carload" are fastened together in the car. The accepted method is to use flat steel bands for this purpose. Heavy steel bands are drawn tightly and securely around groups of packages in the car to build up units of greater mass and weight.

Barrels or rolls of paper are thus bound together. Crates of glassware or insulators, rolls of roofing paper or pumps in crates, radiators or stoves, crates of tin cans or of pails, cases of flat steel or roofing tile, odd shapes and forms of anything—all are tied together.

Steel tape is used as rope would be. If the containers stand on end, the steel strapping runs around, one strand close to the floor and a second near the tops. If the containers are flat, or if loose articles such as pipe or slabs of marble are the commodity, the bands of steel are wrapped around exactly as one would use a rope or twine to tie them into one bundle.

Where the straps run horizontally, as when barrels or other upright containers are the case, the steel bands are first strung along the end and sides of the car. This is accomplished by slipping the steel band into a slot top and bottom of the stays (which holds the two bands properly apart when the loading is completed). The stays hold the bands in proper position while the loading goes forward. The stays are equipped with barbs which may be tacked lightly into the sides of the car. When the loading is completed, the process of drawing up the bands pulls the barbs from the car sides, the two bands being still held parallel in place by the stays as they are tightened and locked. Thus the load is made a unit, completely disconnected from the sides of the car and free to shift as a mass.

Where the containers lie flat, the same bands are placed beneath the pile as it is loaded and then drawn tight much as a rope would be.

In either case, of course, special equipment does the work. The usual way is to have a hand truck, which carries a reel of the steel band and compartments for the necessary tools. The band is sheared off into lengths such as are required for each loading, it not being necessary to stock assorted lengths of steel band. All the tools are sturdy and easy to use; no skilled labor or power of any sort is required. A sealer is used to lock the ends of steel band together.

To unload the car, an ordinary pair of snips will sever the steel band. Then it falls apart and lies on the floor exactly as a length of rope would do, and, still like rope, there is no reason why the material should not be used again. The only loss is the short bit at the sealed

(Concluded on page 51)

TWO BITS

Vol. X. No. 9

A Bit Here, A Bit There

Gotham, February, 1931

Ye Ed. Liberally Remembered During Yuletide's Season

THE Xmas-time incoming mail was abundant in these environs & Ye Ed. was so tenderly inspired by the messages rcvd that we sat down at our typewriter & in almost no time at all, or about 4 hrs & 40 minutes, we dashed off an effulgent & imperishable specimen of poem-like literature which we dare you to peruse:

The Yuletide season was full of cheer
In the *Two Bits* shop & throughout the nation.

Greeting cards reached us from far & near—
So many in fact, they caused a sensation.
Many a storager opened his heart
& wished us a prosperous 'Thirty-one.
& some of the cards were full of art
& together they weighed about a ton.
The trouble is now, we must be polite
& acknowledge the darn things as we should.

So—as postage would cost us more than a mite
(We'd send the replies collect if we could)—

Instead of our writing separate letters
To them as would have joy fill our hollows,
We will smash the conventional Social Fetter
& just mention the senders' name, as follows:

Allied Van Lines, Inc.

Bartlett's, The, *Two Bits*'s Colorado correspondents.

Bedel et Cie., the Paris, France, storagers.

Bostwick, Bill, the Gotham storager, & better ½.

Bragg, Herbie, the Gotham forwarder.

Brock, Frank, the Glendale, Cal., storager, & better ½, Marybel.

Canadian Cartage & Storage Co., Ltd., Montreal.

Cass, Tierney & Johansing, the insurers.

Cole, Frank, the K. C. storager.

Connelly, Jack, the Hartford, Conn., storager.

Crone, Fred, the Vancouver, B. C., storager.

Dintelmann, Geo., the St. Louis storager.

Edmonds, Roy, *Two Bits*'s St. Louis correspondent, & better ½.

Erickson, Elmer, the Chicago storager.

Glenn, Joe, the Buffalo storager.

Halleran, Bill, the Flushing, N. Y., storager.

Haring, Harry Albert, the contribb'g editor, & better ½.

Harner, Don, *Two Bits*'s Pacific Coast representatives, who also sent us a bottle of olives, very practical.

Hayasi, Y., the Tokio storager.

Horrocks, Tom, the Minnesota T. O. A. sec'y.

Jones, Frank, the Grand Rapids storager & cynic, on whose conscience rests the responsibility for Ye Ed. having got



Among Ye Ed.'s Xmas gifts was a box of cigars, as per above, donated by Art Hadley, theatrical cartoonist, on a/c that Art thinks we ought to smoke something different from our normal White Owl species. It was Vice-Prexy Marshall who made the famous comment that what this country needed was a good 5-ct. cigar but that was before Red Buzzards was manufactured. We took some of these to the San Antonio and Atlantic City storagers' conventions in Jan. but was not allowed to smoke them during meetings on a/c they was legislated vs.

wedded, forgot to send us a card this yr & it looks mighty queer.

Kedney, Fred & Harry, the Minneapolis & St. Paul storagers.

Kennelly, Martin H., the Chicago storager.

Lee, Ed., the Chicago storager, & better ½.

Leet, Bill, *Two Bits*'s western mgr, & better ½, May.

Liberty Freight Forwarding & Warehouse Co., Gotham.

Little, Wilson, the A. W. A. mdse div'n exec. sec'y, & better ½.

Manning, Geo., *Two Bits*'s Wash'ton correspondent, & better ½.

Mason, A. V., the Milwaukee storager.

McKeag, Geo., the Winnipeg storager, who shipped us a load of Winnipeg gold-eye (fish), very practical.

McKnight, L. E., the Memphis storager.

Moore's Storage Warehouse, Inc., Bridgeport, Conn.

Mott, Van Wicked, the Wash'ton storager, & better ½, Selma, & their infant yclept Tom.

Nat'l Furniture Warehousemen's Assoc'n.

Murray, Andy, *Two Bits*'s prexy, & better ½, Grace.

Neeser, John, the Gotham storager.

Southern Transfer Co., San Antonio. Sullivan, R. A., *Two Bits*'s New Orleans correspondent, & better ½.

Taylor, Oscar, the Seattle storager, & better ½, Stella.

Term'l Warehouse Co., Philadelphia. Tilly, Dave, the Gotham dock co. prexy, who donated up an up-to-date calendar.

Trans-Continental Freight Co., per Dan Bloom, Ray Conway, Joe Hackett, Bill Hoag & Mike Murray.

Wastie, Harry, the B'klyn storager.

Webster, Harry, *Two Bits*'s sec'y, & better ½.

Wittichen, Carl, the Birmingham storager, & better ½, Julia, & Carl, Jr., who is a stamp collector.

Wood, Ralph, the Chicago storager, & better ½, Lillian, & their dog Dixie.

Ralph saved postage on a/c his was a postcard, & we will quote the verse on it:

The stock market's plumb gone to Hades,
And business is already there.
In spite of the clothes that the ladies
Are using, Lil's apt to go bare;
The bones Dixie's getting are meatless.
Our car's too expensive to run.
My trousers begin to look seatless.
Who says that we all have got fun?
The greeting card prices are frightful.
We know that this card may look queer,
But anyhow—here's a delightful
Old Christmas and Happy New Year.
(Concluded on page 56)

Traffic Management Is Analyzed

*Results of Survey Are Published
by the Department of Commerce*

BY STEPHENS RIPPEY

DISTRIBUTION AND WAREHOUSING'S
Washington Bureau,
1163 National Press Building.

THE Federal Government, through the Department of Commerce, has set out to crown the industrial traffic manager with the dignity and importance to which his place in the field of transportation and distribution entitles him.

In a 172-page book just issued the Department presents many hitherto uncollated facts which show beyond a doubt the value of traffic managers and traffic departments to all firms—even small ones—which distribute goods through any form of transportation. The book was written by Wayne E. Butterbaugh, commercial agent of the Transportation Division of the Department and lecturer on transportation in the University of Minnesota.

Mr. Butterbaugh's report was compiled from returns to hundreds of questionnaires sent out by the Department to firms throughout the United States seeking information as to their experiences with or without traffic departments.

IN his introduction, Mr. Butterbaugh calls attention to the importance which has been attached to solving problems of production and manufacturing. "Astonishing results" have been achieved in cutting production costs, he said.

This mania for greater production at less cost has resulted in other phases of business being overlooked, he says. In fact, he declares, production gains frequently are lost to a considerable extent through careless and inefficient distribution methods. In some cases the cost of distribution actually exceeds the cost of production.

"Many new methods have been adopted to cut the cost of distribution," Mr. Butterbaugh writes. "Certain of these deal with what may be termed the marketing phases of distribution—purchase and sale—as illustrated by the development of mail order houses, chain stores, serve-yourself stores and cooperative purchasing and marketing exchanges.

"But what about physical distribution? Has it kept pace? In a great many companies the physical phases of distribution, including such matters as packing, materials handling, receiving, storing, transporting and shipping have been highly developed. Individual enterprises and in some cases entire trades have long since come to appreciate the advantages of intelligent administration as applied to traffic activities.

"It is generally recognized that the physical-assembling and physical-distributing phases of business—that is, traffic, transportation and shipping—have all too often been neglected by otherwise well managed enterprises. As will be pointed out, this is wasteful; and it is primarily to aid such concerns that this report has been prepared."

Mr. Butterbaugh says his report was confined to the traffic and transportation activities of shippers and receivers as they pertain particularly to the handling of commodities moved via materials-handling devices, railways, waterways, highways and airways; also to the storage, communication and passenger requirements of business enterprises.

It is not intended to represent a census of industrial traffic departments; that is, there has been no attempt to get in touch with all business establishments in the country. Instead the report is intended to furnish a bird's-eye view of the traffic organization of American business in general.

The report is well worth the attention of warehousemen, whether or not they have traffic departments. It is particularly of interest to those who always have felt that they could not afford to maintain a traffic department.

Along this line Mr. Butterbaugh says: "Money returns alone may justify the operation of a traffic department, but measurable results tell only a part of the story. Traffic departments merit

The survey was undertaken at the request of the Associated Traffic Clubs of America and similar organizations. According to William I. Cooper, director of the Bureau of Foreign and Domestic Commerce of the Department, the findings of the report should be of value both to enterprises with and those without traffic departments; to trade and community associations; regulatory bodies; carriers, and others interested in the economical and efficient handling of goods.

Mr. Cooper, who had general supervision of the survey, pointed out that "there has been an absence of information concerning the general practices of business establishments in the organization of traffic departments and the delegation of work to them for direct supervision or advisory control which has prevented the formulation of general principles governing traffic matters."

The report, Mr. Cooper said, does not attempt to discuss in detail every traffic activity nor to list every opportunity for waste or saving; its value lies in the many avenues for thought and study which its opens up.

their establishment, in many cases, because of the services performed for the business as a whole. Such services can seldom be measured in dollars and cents."

Because of the necessarily great importance of the cost of a traffic department, Mr. Butterbaugh devotes an entire chapter to this subject. He goes exhaustively into salaries and other expenses, showing by tables the relation of traffic department costs to production costs, total costs, etc.

"The need for traffic administration is not dictated by the size of the business," he asserts. "Administration of traffic is necessary regardless of the amount of shipping. Size does, however, affect a firm's need for a separate traffic department and the sum it can allot for traffic work."

"The cost of traffic administration, like the cost of all phases of business administration, bears down most heavily upon the small concern. The problem of the small enterprise, therefore, is to secure adequate traffic administration at a cost within its means.

"To maintain its own traffic department, or even a full-time traffic manager, is not only unnecessary but impossible for the firm doing a small volume of business. Consequently for these firms capable traffic administration—like capable legal counsel, medical aid, accounting or financial assistance—is only to be had from the outside. The service

of outside traffic bureaus are available to the small shippers of every commodity. While such assistance must be selected with care, it solves the problem of the small concern.

"Traffic administration of some kinds and to some extent can safely be delegated to an outside service bureau for handling; but at the same time some executive within the business should understand the concepts of traffic administration in order intelligently to follow and check the work of the outside agency."

One suggestion made by Mr. Butterbaugh seems of particular value. That is that business establishments arrange to have their transportation situation investigated periodically, just as they do their own accounting situation.

"At a nominal cost," he points out, "they can have an unbiased, intelligent study made and a report rendered based upon a survey of their traffic, prepared by an outside traffic expert. Such a report would make it possible to correct promptly any unsatisfactory situation that might be revealed.

"If everything is in order and being properly handled, this assurance would in itself be worth having. Since traffic management is new, many concerns might find that they stand in need of a complete reorganization of their ship-

ping and transportation policies and methods."

Taking up the question of traffic administration costs as compared with total expenses, Mr. Butterbaugh found that the annual traffic administration cost for 33 small concerns averaged \$3,206; that of 62 medium-sized concerns, \$6,690; and that of the 85 large concerns, \$32,770. For the purposes of the report, small concerns were those that have fewer than 100 employees, medium-sized concerns those having between 100 and 500, and large concerns those having more than 500 employees.

The annual traffic administration costs of the small concerns ranged from \$225 to \$17,000 each, with total expenses ranging from \$22,776 to \$3,858,288. The annual traffic administration costs of the medium-sized concerns ranged from \$150 to \$28,450 with total expenses ranging from \$88,000 to \$9,126,073. Traffic administration costs of the large firms each year ranged from \$2,500 to \$1,106,013, with total expenses ranging from \$263,814 to \$127,469,332.

Tabulating the salaries paid by the concerns of various sizes, Mr. Butterbaugh found that in the small concern category there were two general traffic managers whose salaries ranged from \$4,420 to \$6,600 a year, the average be-

ing \$5,510; 61 traffic managers with salaries ranging from \$900 to \$6,000 annually and averaging \$3,205; and 14 assistant traffic managers with salaries ranging from \$960 to \$3,900 a year and average \$2,220.

For the medium-sized concerns he found two general traffic managers with salaries ranging from \$10,000 to \$15,000 annually and averaging \$12,500; 114 traffic managers with salaries ranging from \$1,560 to \$5,500 and averaging \$3,126; and 20 assistant traffic managers with salaries ranging from \$1,200 to \$3,500, and averaging \$2,142.

For the large concerns he found 13 general traffic managers with salaries ranging from \$3,500 to more than \$15,000, with an average of \$9,050; 3 concerns with assistant general traffic managers with salaries ranging from \$2,700 to \$6,000 and averaging \$4,350; 162 traffic managers with salaries ranging from \$1,800 to \$15,000 and averaging \$4,090; and 58 assistant traffic managers with salaries ranging from \$1,300 to \$5,000 and average \$3,168.

The average salaries paid general traffic managers of all the concerns was \$9,038 a year; assistant general traffic managers, \$4,350; traffic managers, \$3,636; and assistant traffic managers, \$2,886.

The Public Enemy Today

THERE are far too many people, from business men to laborers, who are giving a too eager ear to wild rumors and spiteful gossip tending to destroy confidence and create an atmosphere of general distrust.

¶ The victims of vague fear, on the street and in the market place, are a menace to the community.

¶ These are the defeatists that hold back the return of that prosperity that cannot but come from the limitless resources of the nation.

¶ They are the terrorists that drive the dollar into hiding when it ought to be at work making jobs for the unemployed.

¶ They are the scarecrows of imaginary disasters, the spreaders of rumors having no basis in reality—the carriers of lies.

¶ They are feeders of that mob psychology which creates the spirit of panic.

¶ They blind the thoughtless to the very evident soundness of our great business enterprises.

¶ It is the pessimists among business men, who lack the red blood of courage, and who are mentally sick with vain imaginings, who are responsible for the gloom among the less informed.

¶ The most serious threat to our country today is in the business man of little faith, whose fears are played upon by the most silly gossip which poisons the air with absurd rumors and mean and malicious lies.

¶ These are the public enemies, and in days of war they would be so proclaimed, and in any crisis they are worse than a nuisance—they are a menace.

¶ It is not like Americans to shudder at shadows, or to surrender to fear. The courage, faith, determination, grit and confidence that have made them incomparable on the

battlefield have never been more needed than they are today.

¶ But we have permitted the croakers and the irresponsible gossips to charge the air with the poison of falsehoods and baseless rumors, and the air must be purged of the poison.

¶ A truce, then, to the gossips and the mean inventors of wild rumors, for these are the public enemies, whether they operate in the pool rooms or in the most exclusive clubs.

¶ America is all right if Americans are not all wrong. But the weak, the timid, or the malicious croaker of disaster must be made to understand by the way in which his story is received that he is engaged in rather disreputable business.

¶ This breed of mischief-makers is not unknown to our experiences before. We had them in 1873 when they assured us that railroad building had wrecked the country, that vast sections the roads had tapped would have to be given back to the wilderness again.

¶ We had them in the depression of 1893 when they told us that we had exhausted our markets and thereafter would decline in prosperity and trade.

¶ And America moved on each time to greater heights and more abundant prosperity than it had ever known before.

¶ American Courage, American Calmness, American Steadiness, American Grit, American Common Sense, and the cooperation of all classes of people in creating an atmosphere of confidence and faith will hasten the day of the restoration of prosperity.

—The Evening World, New York.

1931 America Forward March

Occupancy Reported 68.8% on Oct. 31 as Against 68.4% at End of September

**Latest Government Figures Indicate a Slight Average Advance.
Tonnage Statistics for October Show Larger Percentage
Entered Storage Than in September**

By KENT B. STILES

PUBLIC-MERCHANDISE WAREHOUSING September-October, 1930

Division and State	Occupancy				Tonnage					
	Number of Warehouses		Per Cent of Floor Space Occupied		Number of Warehouses		Received During Month	Delivered on Arrival	Received During Month	Delivered on Arrival
	*Sept. 1930	Oct. 1930	*Sept. 1930	Oct. 1930	*Sept. 1930	Oct. 1930	*September 1930		October 1930	
NEW ENGLAND: (Total)	69	67	53.2	54.2	52	53	14,886	5,678	19,086	11,861
Ver. and New Hampshire...	6	8	24.2	24.6	8	8	110	84	252	40
Massachusetts.....	40	40	54.9	53.0	32	33	10,974	2,037	13,968	8,584
Connecticut.....	10	11	61.1	62.6	6	6	1,163	3,082	1,446	2,972
Rhode Island.....	13	8	44.1	49.6	6	6	2,639	475	3,420	265
MIDDLE AT.: (Total)	505	504	64.2	64.0	405	409	107,049	14,330	129,270	15,706
N. Y. Met. Dis., Total (1)	400	394	63.0	62.4	336	338	63,302	4,092	79,980	4,402
Brooklyn.....	249	249	61.3	60.8	241	241	23,902	1,729	26,412	1,503
Manhattan.....	79	77	65.8	66.4	30	30	17,614	500	16,628	240
Nearby N. J.....	68	64	64.5	60.8	62	64	21,586	1,723	36,840	2,559
All Other.....	4	4	42.9	41.0	3	3	200	140	100	100
N. Y., except Met. Dist.....	41	43	70.5	74.4	27	28	15,437	5,872	17,882	6,383
N. J., except Met. Dist.....	7	11	33.2	58.0	8	8	790	146	1,339	250
Pennsylvania.....	57	56	66.8	65.8	34	35	27,520	4,220	30,069	4,671
E. NORTH CEN.: (Total)	211	228	76.1	74.6	183	187	101,821	23,993	120,446	23,103
Ohio.....	45	49	80.5	78.2	40	41	24,115	6,482	29,032	7,500
Indiana.....	26	26	70.5	76.7	23	23	4,114	1,916	3,871	2,012
Illinois, except Chicago.....	15	21	75.9	73.1	10	11	3,429	2,514	3,363	2,804
Chicago.....	40	40	82.8	78.1	37	38	50,190	4,859	55,855	4,448
Michigan.....	49	52	67.6	69.3	39	39	16,268	3,758	22,681	3,692
Wisconsin.....	36	40	62.6	59.3	34	35	3,705	4,464	5,644	2,647
W. NOR. CEN.: (Total)	171	179	70.4	72.2	161	162	72,136	19,791	71,803	19,121
Minnesota, except Minne- apolis and St. Paul.....	14	13	71.2	58.5	14	13	1,310	1,005	787	680
Minneapolis and St. Paul.....	41	43	78.0	78.2	41	42	21,769	6,461	22,177	5,925
Iowa.....	24	26	68.9	68.6	21	21	10,315	4,129	11,767	4,625
Missouri, except St. Louis.....	21	23	69.3	74.2	23	23	9,814	1,163	8,771	651
St. Louis.....	14	14	67.0	72.3	9	9	6,002	285	8,396	396
North Dakota.....	12	12	72.0	76.8	11	12	3,547	289	3,521	299
South Dakota.....	5	5	79.2	75.2	6	5	1,288	98	614	21
Nebraska.....	26	26	59.6	60.7	20	20	10,257	3,329	9,445	3,227
Kansas.....	14	17	75.6	74.6	16	17	7,834	3,032	6,325	3,297
SO. ATLANTIC: (Total)	92	109	73.7	75.4	103	101	42,048	10,340	43,150	10,505
Maryland and Delaware.....	29	29	72.1	73.6	27	26	25,171	2,352	25,166	2,320
District of Columbia.....	12	12	69.4	74.7	11	11	2,192	1,902	2,443	2,303
Virginia.....	12	12	80.1	81.3	12	12	2,636	892	3,158	907
West Virginia.....	8	9	84.8	82.6	8	8	682	156	1,081	532
North and South Carolina.....	8	25	80.0	77.8	23	23	2,254	507	1,874	993
Georgia and Florida.....	23	22	72.1	75.7	22	21	9,113	4,531	9,428	3,550
SO. CENTRAL: (Total)	111	113	73.1	73.0	97	94	62,205	17,060	50,326	14,976
Kentucky and Tennessee.....	13	13	81.9	83.0	13	13	6,172	2,740	5,960	2,360
Alabama and Mississippi.....	17	17	66.2	69.4	17	17	1,867	1,467	2,403	1,664
Arkansas.....	7	8	87.3	74.1	7	7	2,672	1,110	2,997	1,274
Louisiana.....	20	20	71.7	69.2	19	19	17,631	1,263	14,733	1,161
Oklahoma.....	13	14	90.1	87.4	12	12	8,557	2,801	8,815	3,954
Texas.....	41	41	70.8	71.6	29	29	25,306	7,679	15,418	4,563
MTN. and PAC.: (Total)	201	213	70.6	72.0	185	190	87,829	40,611	92,108	39,314
Idaho and Wyoming.....	6	7	67.7	62.3	7	7	736	1,717	621	1,044
Montana.....	12	12	80.2	90.8	11	11	1,868	587	2,461	1,475
Arizona and New Mexico.....	9	16	67.0	63.3	9	12	580	1,406	774	1,725
Utah.....	7	7	83.3	85.2	6	6	2,694	279	3,374	524
Colorado.....	18	16	74.9	76.7	13	13	2,130	1,957	3,149	1,830
Washington.....	29	32	67.0	74.1	28	28	23,214	12,314	23,124	11,072
Oregon.....	12	11	67.2	65.8	10	10	22,710	16,745	15,573	16,601
California.....	108	112	70.7	71.0	101	103	32,597	6,608	42,932	6,043
Totals for United States.....	1,360	1,413	68.4	68.8	1,186	1,196	487,974	131,803	526,189	134,586

* Revised.

(1) Because of the importance of this territory, figures are shown separate from the State totals.

A GAIN of four-tenths of one per cent in the average occupancy of public merchandise warehouses is noted in the latest Government report based on returns from the industry. The accompanying table, made public by the Department of Commerce late in January, shows that merchandise occupied 68.8 per cent of the occupiable space at the end of October, 1930, as compared with 68.4 per cent on the final day of September. The October percentage is provisional, subject to revision because of subsequent returns.

The provisional 68.4 per cent for Oct. 31, while 7.5 per cent below the mark reported on the same date in 1929, is 2.4 per cent above the level recorded on Oct. 31, 1928. It will be recalled that in the fall of 1929, just prior to the Wall Street debacle, the average occupancy line was rising toward the highest peak (attained at the close of November, 1929) reached since the gathering of these statistics was inaugurated in January of 1928. The following comparisons as of Oct. 31 are available:

	1928	1929	1930
Oct. 31.....	66.4	76.3	68.8

The tonnage figures in the accompanying table show, provisionally, that out of 660,775 tons arriving at the 1196 reporting warehouses, during last October, 526,189 tons, or 79.6 per cent, entered storage, the balance being delivered on arrival. This compares with 78.7 per cent in September, when

587,974 tons went into storage out of 619,777 tons arriving at 1186 reporting warehouses.

The following percentages show that the October percentage of 79.6 is higher than the percentages reported for the corresponding month in both 1929 and 1928:

	1928	1929	1930
October	73.5	79.4	79.6

Occupancy

THE 7.5 per cent average decline in occupancy, for the entire country, this past Oct. 31, from the mark on the previous year's corresponding date, was not reflected in Vermont, New Hampshire, Connecticut, Delaware, Maryland, District of Columbia, the Virginias, the Carolinas, Kentucky, Tennessee, Alabama, Mississippi, Arkansas, Louisiana, Oklahoma and Utah.

The following comparisons are available:

	Occupancy Oct. 31		
	1928	1929	1930
Mass.-Vt.	59.8	54.3	...
Vt.-N. H. . . . .	...	...	64.6
Mass. . . . .	...	...	53.0
Conn.-R. I.	57.7	59.5	...
Conn. . . . .	...	...	62.4
R. I. . . . .	...	...	49.6
N. Y. Met. Dist.	60.4	82.1	62.2
Brooklyn	48.9	76.5	60.8
Manhattan	76.8	84.9	66.4
Nearby N. J. & others	71.0	80.4	...
Nearby N. J. . . . .	...	...	60.8
All other . . . . .	...	...	41.0
N. Y. State	57.9	80.9	...
N. Y. State except Met. Dist. . . . .	...	...	74.4
N. J. State	72.0	82.0	...
N. J. State except Met. Dist. . . . .	...	...	58.0
Pennsylvania	71.0	75.5	65.8
Ohio	86.5	91.5	78.2
Indiana	74.6	82.7	76.7
Illinois	75.9	87.0	...
Illinois except Chicago . . . . .	...	...	73.1
Chicago	76.5	88.2	78.1
Michigan	68.0	73.2	69.3
Wisconsin	80.1	92.0	59.3
Minnesota	72.9	84.6	...
Minn. except Mpls & St. P. . . . .	...	...	58.5
Mpls. & St. Paul	73.2	84.5	78.2
Iowa	68.2	73.1	68.6
Missouri	75.3	82.9	...
Missouri except St. Louis . . . . .	...	...	74.2
St. Louis	71.3	82.5	72.3
No. So. Dak.	83.1	94.4	...
No. Dak. . . . .	...	...	76.8
So. Dak. . . . .	...	...	75.2
Nebraska	61.3	77.5	60.7
Kansas	68.5	82.0	74.6
Del., Md. & D. C.	54.3	61.0	...
Del. & Md. . . . .	...	...	73.6
D. C. . . . .	...	...	74.7
Va. & W. Va.	68.7	71.1	...
Virginia . . . . .	...	...	81.3
West Virginia . . . . .	...	...	82.4
No. & So. Carolina	67.7	68.4	77.8
Ga.-Fla.	77.8	82.2	75.7
Ky.-Tenn.	74.3	70.0	83.0
Ala.-Miss.	88.0	68.0	69.4
Ark.-La.-Okla.	57.8	58.0	...
Arkansas . . . . .	...	...	74.1
Louisiana . . . . .	...	...	69.2
Oklahoma . . . . .	...	...	87.4
Texas	61.3	73.2	71.6
Idaho-Wyo.-Mont.	83.7	93.8	...
Idaho-Wyo. . . . .	...	...	62.3
Montana . . . . .	...	...	90.8
Ariz.-Utah-New-Mex.	80.1	83.0	...
Ariz.-N. Mex. . . . .	...	...	63.3
Utah . . . . .	...	...	85.2
Colorado	65.9	77.3	76.7
Washington	66.6	80.2	74.1
Oregon	64.8	70.7	65.8
California	77.8	79.1	71.0
Average for entire U. S.	66.4	76.3	68.8
Warehouses reporting	1211	1229	1413

Comparing the Oct. 31 occupancy percentages in the table on the opposite page with those of Sept. 30, it is disclosed that the gain of 0.4 per cent was not reflected in Massachusetts, Pennsylvania, Ohio, Illinois, Wisconsin, Minnesota outside of Minneapolis and St. Paul, Iowa, South Dakota, Kansas, West Virginia, the Carolinas, Arkansas, Louisiana, Oklahoma, Idaho, Wyoming, Arizona, New Mexico and Oregon. Elsewhere advances were recorded.

Tonnage

AS already pointed out, the percentages of volume which entered storage in October, out of the total arriving tonnage, was slightly larger in the 1930 month than in October of 1929, the gain being two-tenths of one per cent for the entire country. By division, the comparisons are as follows:

	Percentage Entering Storage—October		
	1928	1929	1930
New England	72.3	72.2	61.7
Middle Atlantic	76.4	88.4	89.2
East North Central	85.9	85.9	76.2
West North Central	72.8	80.7	79.0
South Atlantic	48.8	39.7	80.4
East South Central	76.2	65.9	67.5
West South Central	73.0	71.5	79.3

Bennett Makes His Trucks Work at Regular Wages

GETTING at exact costs is one of the most difficult problems that M. B. Bennett, of the Bennett Transfer & Storage Co., Raton, N. Mex., has ever faced. And difficulties are not unusual to this New Mexico man who has at all times at least three of his string of twenty-six trucks on the dangerous mountain roads.

The diversity of the Bennett business caused all the problem. He runs a regular long distance hauling line across Raton Pass, seven thousand feet high. He operates to many coal mines in the nearby mountains seven to seventeen miles. He takes long trips into the arid plateau land to the southward fifty miles and more. He contracts work for large supply companies—works by the hour on household moving—by the mile on longer trips.

The one remedy that worked in true, clear cut fashion was, in effect, putting his trucks to work at regular wages, out of which came their upkeep, something set aside for the old age, some interest, some insurance. The effect of the whole was the same as a family budget. Book-keeping became just as simple. When additional expenses arose that were unlooked for, they were charged against the truck's account, and paid out with interest.

Some machines began to accumulate bank accounts—and here lie the Bennett profits. That the system has worked is evidenced by the growing size of these bank accounts. An extra ten per cent has been the result within five months after the system was adopted. Since exact costs could then be arrived at, the worth of the particular truck could be

Percentage Entering Storage—October

	1928	1929	1930
Mountain	68.4	67.7	65.2
Pacific	76.5	63.3	70.8
Entire country	73.5	79.4	79.6
Warehouses reporting	1211	1229	1196

Comparing this past October's tonnage percentages with those recorded for September, it is found that an advance of nine-tenths of one per cent was reported for the entire United States. This upward turn was not reflected in four of the divisions, with New England evidencing the maximum decline, 10.7 per cent. The advances were led by the Pacific group with 2 per cent. The comparisons by divisions for the two months follow:

	Percentage Entering Storage—1930		
	Sept.	Oct.	Change
New England	72.4	61.7	-10.7
Middle Atlantic	88.2	89.2	+1.0
East North Central	80.9	76.2	-4.7
West North Central	78.5	79.0	+0.5
South Atlantic	80.3	80.4	+0.1
East South Central	65.6	67.5	+1.9
West South Central	80.8	79.3	-1.5
Mountain	65.3	65.2	-0.1
Pacific	68.8	70.8	+2.0
Entire country	78.7	79.6	+0.9
Warehouses reporting	1186	1196	...

BY

T. C. CUNNINGHAM

immediately ascertained. In cases where the comparative figures showed that the operating cost was unwarranted, the truck was "fired." Another took its place, was given a fresh start—made to prove its worth, as any apprentice workman is expected to do.

The effect that the different drivers had on the behavior of the trucks was also then made known to Mr. Bennett. He could countercheck the costs and the receipts of the truck against the employees who handled it—the system meant more than the improvement of truck earnings.

With this knowledge before him, all fair methods could be employed to induce the truck driver to increase his care, his subsequent efficiency. Called aside by Mr. Bennett, he could be told what the record revealed. Mr. Bennett presumed that the man would be as interested as he was in his own improvement, and suggested means whereby this result could be obtained.

"It was surprising," said Mr. Bennett, "to note, first, the manner in which the drivers took the news that a manner of checking the individual had been arrived at. It was equally as surprising to observe the manner in which they responded to an appeal for more care, for more efficiency in their handling.

"This system has been of greatest help in coordinating the different departments under which my business falls. Before that time, either one or the other—the hourly or the mileage—was arbitrary. There were times, in fact, when they were guesswork. Guesswork never brought profits even to a gold prospector."

FROM THE LEGAL VIEWPOINT

By
Leo T. Parker

Liability for Value of Missing Goods

GENERALLY speaking, a warehouseman is liable for the value of goods missing from his warehouse where the testimony shows that he received the goods in his warehouse and later exercised dominion or control over them.

For instance, in *St. Louis-New Orleans Co. v. Hynicka*, 172 N. E. 687, it was disclosed that a warehouseman received in his warehouse 105 cases of Lasch's Product, of the value of \$798; five barrels of root beer, of the value of \$400; and one lot of drinking cups, of the value of \$128.40. Later, when the owner called for the goods they were missing and he then sued the warehouseman for the value of the missing merchandise. In view of the fact that the warehouseman offered no testimony showing who received the goods or took them from his warehouse, the higher Court held the owner entitled to recover their full value.

Damages Allowed an Injured Employee

WHERE the negligence of a warehouseman results in an injury to his employee, the latter is entitled to an amount of damages adequately to compensate him for loss of the income resulting as a consequence of the injury.

For example, in *Roads v. Kelleher Drayage & Warehouse Co.*, 26 S. W. (2d) 764, it was disclosed that a warehouse employee was seriously injured when a chain of a derrick broke, causing a heavy weight to fall on his foot, requiring the amputation of two-thirds of his left leg below the knee. The injury necessarily confined him to the hospital for a period of five months at least.

The injured employee was a laborer. was earning 40 cents an hour, and worked eight hours a day. The lower Court held the warehouseman liable for \$17,500 damages. The latter appealed to the higher Court on the contention that the judgment was excessive. It is interesting to observe that the higher Court upheld the lower Court's decision, saying:

"We infer from the evidence that he earned about \$900 a year. . . . Plaintiff was deprived of the power to labor and to earn a living during the rest of his life through the negligence of defendant [warehouseman]. A principal of \$15,000, drawing 6 per cent interest, was neces-

sary as the basis for an income of \$900 a year. The present value of \$15,000, at fifty-two years of age, is about \$8,800, and that income plaintiff is held to have lost. . . . Moreover, the crushing of the foot and the operations to save his leg, as well as the amputation, seemingly were agonizing. Under the facts and circumstances of this case, we do not think the verdict was excessive."

Warehouseman's Duty to His Patrons

THE general rule deduced from the previously decided legal cases is that an owner of a warehouse owes a duty to patrons to exercise ordinary care to keep the premises in a reasonably safe condition and to give warning of any hidden peril.

Obviously, as a warehouseman is not an insurer of the safety of the patrons

testimony tended to show that there was much more oil at this point than at any other point in the building. . . . These pertinent facts point unerringly to the conclusion that the oil was not properly applied, or that it was applied in a negligent and unusual manner. . . . Hence the trial judge properly submitted to the jury the question as to whether the condition had existed for such length of time as to have been discovered by the exercise of ordinary care."

Proof Is Necessary in Liquor Conspiracy

GENERALLY speaking, conviction on a charge of conspiracy to violate the prohibition laws cannot be sustained unless convincing testimony is introduced which proves the conspiracy beyond a reasonable doubt. This is true, although the owner of a warehouse admits leasing a space to a person who intends to violate the prohibition laws.

For instance, in *Tingle v. United States*, 38 F. (2d) 573, it was disclosed that prohibition officers raided a warehouse and found in a long, narrow room, on the south side of the first floor, five steel vats with a capacity of 1,250 gallons, two of which were partially full of beer containing 5.8 per cent of alcohol by volume. In addition to this were found a number of kegs, some containing beer, others empty; two tall steel carbonating tanks, each with a capacity of 1,250 gallons; together with all the customary paraphernalia of a fully equipped brewery. The room in question was 18 feet by 40 feet in size and was entered only through the warehouse. The officers found its door fastened, and entered by breaking the lock. The brewery was not in operation and no one was found in charge. The warehouseman admitted that he knew the use intended to be made of the room when he leased it.

The lower Court convicted the warehouseman of conspiring to violate the prohibition laws, but the higher United States Court reversed this decision, saying:

"In conspiracy cases, the unlawful combination, confederacy, and agreement between two or more persons, that is, the conspiracy itself, is the gist of the action. . . . It is, therefore, primarily essential to establish the existence of a confederation or agreement between two or more persons before a conviction for conspiracy to commit an offense against the United States can be sustained."

Your Legal Problems

MR. PARKER answers legal questions on warehousing, transfer and automotive affairs.

There is no charge for this service.

Write us your problems. Publication of inquiries and replies gives worth-while information to you and to your fellows in business.

while on the premises, in controversies where doubt exists the details of the testimony must be submitted to a jury. Moreover, the higher Court will not reverse the jury's decision unless the evidence clearly indicates error on the part of the jury in arriving at the verdict.

For illustration, in *Bouden v. Kress*, 152 S. E. 625, a patron sued to recover damages for an injury sustained when she slipped and fell in oil used to settle dust on the floor. The jury held the proprietor liable; and the higher Court upheld this decision, saying:

"Viewing the evidence of plaintiff [patron] with that liberality which the law demands in cases of non-suit, it is apparent that there was an accumulation of oil upon the floor where the plaintiff sustained her injury. This accumulation was unusual. for the reason that the

Mortgagee Recovers from Purchaser

IT is well settled law that evidence of verbal agreements will not be considered by a Court to vary the meaning of a written agreement. Moreover, where the terms of a written contract are clear and unambiguous they cannot be varied or contradicted by evidence of custom or usage, and this is true whether the contract is written or verbal.

For example, in *Anadarko v. Harp*, 291 Pac. 116, it was shown that a firm, which held a chattel mortgage on merchandise, did not object when the owner sold the goods. It was disclosed that it was a general custom in this locality that holders of chattel mortgages of this kind would permit debtors to sell the mortgaged goods and then pay the mortgage debt. However, this debtor failed to pay his mortgage debt and the holder sued to recover possession of the goods from the purchaser. The latter contended that the holder of the mortgage had lost his rights because he had failed to object when knowing that the owner intended to sell the goods and, also, because it was a general custom in that locality to transact business in this manner. Notwithstanding this argument, the Court held the holder of the mortgage entitled to recover possession of the goods from the purchaser. This Court said:

"Consent is not to be implied merely from equivocal conduct, or from the fact that the mortgagee [holder of mortgage] remained silent when told of an intended sale. . . . In the instant case, there is no evidence, aside from mere silence, to show an implied consent. . . . Evidence of custom or usage is not admissible to vary, add to, or contradict, the term of a plain, definite and unambiguous written instrument, or to bind a party thereto, or impose a duty or obligation upon a party to such contract, not incorporated therein."

Lender's Lien on Stored Goods

NEITHER a holder of a mortgage, nor a person who has a lien on goods, retains any authority or control over the merchandise if he fails to record the lien or mortgage with the county clerk or neglects to give notification of his claim to third parties. This rule is especially applicable if the party who claims a lien gives up possession of the goods.

For illustration, in *McCoy v. American Express Co.*, 171 N. E. 749, it was disclosed that a person named Burr loaned money on rugs stored in a warehouse. The owner did not take them out of the warehouse and deliver them to Burr, nor did he deliver to Burr any document of title, or any order on the warehouse whereby possession could be acquired. He did no more than promise that the goods would be held as security for the loan. In other words, at the making of the loan Burr had no possession either in person or by an agent. He had not even the promise of possession.

He had nothing but a promise of security—a promise that was equivalent between the parties to an equitable lien. The rugs were to be kept in a warehouse in the name of the pledgor where they had been before the loan. There was no promise by the warehouse to Burr to hold possession for his use. There was no delivery of any order or of any document of title whereby Burr was to be placed in a position to go to the warehouse and exact possession for himself.

Later, without knowledge of Burr, the owner removed the rugs from the warehouse and shipped them to a consignee, to whom the carrier made delivery. Burr sued to recover damages, contending that neither the warehouseman nor the carrier should have made delivery. However, the Court held Burr not entitled to a judgment, saying:

"In brief there must be proof that Burr, either personally or by an agent, was the holder of a pledge. It is not enough that he may have been entitled to an equitable lien. . . . If he had such a lien, it continued to be enforceable after the rugs had been surrendered into the possession of the general owner just as fully as before. To charge the carrier with damages on the basis of a conversion there must be proof of something more. . . . Was Burr the holder of a pledge? The rule is fundamental that there is no pledge without delivery. . . . Possession is not changed by the promise of the owner that he will hold the thing thereafter for the use of the pledgee. . . . Indeed, a pledge once accomplished may be lost if the chattel is put back without restriction in the hands of the pledgor, though the result will be different if it is returned for a temporary or special purpose."

Cotton Ginning Held Public Utility

IN almost all States laws have been enacted declaring businesses necessary to the health, comfort and welfare of the public to be public utilities and uncontrollable by laws of the State Legislature.

The Court divides businesses, said to be "clothed with a public interest," into three classes and defines the second and third classes as follows:

(1) Certain occupations, regarded as exceptional, the public interest attaching to which, recognized from earliest times, has survived the period of arbitrary laws by Parliament or colonial Legislatures for regulating all trades and callings. Such are those of the keepers of inns, cabs, and grist mills.

(2) Businesses which, though not public at their inception, may be fairly said to have risen to be such and have become subject in consequence to some Government regulation. They have come to hold such a peculiar relation to the public that this is superimposed upon them. In the language of the cases, the owner by devoting his business to the public use, in effect grants the public an interest in that use and subjects himself to public regulation to the extent of that interest

although the property continues to belong to its private owner and to be entitled to protection accordingly.

(3) Businesses such as waterworks, gas, electric and ice plants, and transportation companies.

It is settled by recent decisions of this Court that a State Legislature is without constitutional power to fix prices at which commodities may be sold, services rendered, or property used, unless the business or property involved is "affected with a public interest." That phrase has become the established test by which the legislative power to fix prices of commodities, use of property, or services, must be measured.

As applied in particular instances, its meaning may be considered both from an affirmative and a negative point of view. Affirmatively, it means that a business or property, in order to be affected with a public interest, must be such or be so employed as to justify the conclusion that it has been devoted to a public use and its use thereby in effect granted to the public. Negatively, it does not mean that a business is affected with a public interest merely because it is large or because the public are warranted in having a feeling of concern in respect to its maintenance.

The expression "clothed with a public interest," as applied to a business, means more than that the public welfare is affected by continuity or by the price at which a commodity is sold or a service rendered. The circumstances which clothe a particular kind of business with a public interest must be such as to create a peculiarly close relation between the public and those engaged in it, and raise implications of an affirmative obligation on their part to be reasonable in dealing with the public.

In nearly all the businesses the thing which gave the public interest was the indispensable nature of the service and the exorbitant charges and arbitrary control to which the public might be subjected without regulation.

The latest higher Court case on this subject is *Chickasha Cotton Oil Co. v. Cotton County Gin Co.* 40 F. (2d) 846. In this case the higher Court held the cotton ginning business to be a public utility, saying:

"Looking to the facts on which the power of the State is rested we think it is well sustained. A cotton gin is a necessity to the cotton grower. It is an essential factor in rendering both cotton and seed fit for any practicable use. . . . But the necessity of resorting to a gin renders its operation a matter of public interest. The patronage of a gin is strikingly unlike that of stores for the purchase of food or apparel. . . . A gin is similar to a grist mill where farmers must have their grain ground to render it suitable for use. The mill prepares the grain for that purpose. The gin separates the cotton from the seed and prepares both for market. . . . The public need is apparent of a limitation in the number of local gins, apportioned to the patronage and made effectual by license, and of their regulation as to equipment

and operation, and as to rates to prevent exorbitant charges for the service."

Validity of Motor Truck Taxation

THE general rule is well settled that each State Legislature is an independent body entitled to exercise all legislative power under the limitation of the Constitution of that State and the United States. Among the many powers possessed by the State there are two inherent powers, one, known as the power of taxation; the other, as the police power. The police power often is exercised by way of a license.

It is also well established that where the charge for a motor truck license is in the exercise of the police power, the amount which may be exacted must be limited and measured by the necessary or probable expense of issuing the license and such inspection, regulation, and supervision. However, a taxation law enacted by a State Legislature may include the cost of building highways and the probable cost of maintaining them in consideration of the damage caused to the highway by the vehicles being taxed.

For instance, in *Solberg v. Davenport*, 232 N. W. 477, it was disclosed that a State law provides:

For motor trucks equipped with the pneumatic tires, the annual license fee shall be:

	Per Annum
For 1 ton or less capacity	\$15.00
For 1 1/2 ton capacity	25.00
For 2 ton capacity	40.00
For 2 1/2 ton capacity	65.00
For 4 ton capacity	160.00
For 5 ton capacity	250.00
For 6 ton capacity	300.00

Trucks exceeding six-ton capacity: The license fee for trucks for each ton of load capacity above six ton shall be fifty dollars in addition to the six-ton rate.

The law also provides that the owner of any motor truck or trailer may secure a license therefor at a higher rated loading capacity than that specified by the manufacturer or maker, by the payment of the fee required therefor.

The Sioux City Motor Express Co. was the owner of four motor trucks, equipped with pneumatic tires, which were used in the business of transporting freight. These trucks had a manufacturer's rated loading capacity of 2 1/2 tons each, but the company regularly hauls from five to seven-ton loads upon each of the trucks.

The company paid license fees for 2 1/2-ton trucks, amounting to \$65 for each, but suit was filed by the State officials to collect an additional amount based upon the six-ton capacity taxation law.

It was contended that the State could not legally collect greater license fees than those specified by the law for trucks having 2 1/2-ton capacity, and that the capacity of each truck should be determined by the truck manufacturer's rating instead of the weight of goods hauled.

However, the Court held the company liable for payment of license based on the capacity or weight of freight transported, instead of the capacity of the

trucks as listed by the manufacturer. This Court said:

"It is quite evident that the charge herein is a charge for the privilege of using the streets and highways as a place of business. The highways belong to the public for ordinary use and general traffic, and they are free and common to all. Such use, however, is a mere privilege and not an inherent or natural right. . . . Such right to the use of the public highways is not absolute and unqualified, but is subject to the limitation or control of the Legislature. While these are the general rights of the public on the highways, they do not carry with them a right to use the public highways as a place of business. . . . Aside from what has been said heretofore, it is a well known fact that the State has improved its roads at a large expenditure of money and is now engaged in creating a network of hard-surfaced or paved roads within the state. It is also true that, the heavier the load carried on these hard-surfaced roads, the more damage and destruction thereto. This necessitates improvements and an increase in the cost of maintenance, and it is no more than right and just that those who contribute to the necessity of construction and maintenance of such roads should pay, or help to pay, the cost of such increase expense, in the maintenance thereof."

Grounded Complaint Is Essential

THE law is well established that the Courts will hold unreasonable laws invalid, particularly when the authorities attempt to enforce them. However, usually a Court will not render a decision in favor of a warehouseman who files suit asking for an injunction against enforcement of a law not presently being enforced by the authorities.

For example, in the recent case of *Cathcart Van & Storage Co., Inc., v. City of Atlanta*, 151 S. E. 489, it was disclosed that a municipality enacted an ordinance requiring movers of household goods to obtain a permit from the city clerk therefore. The law provides that the application for such permit must be filed with the city clerk not less than three days prior to making such transfer, and that the applicant must pay a fee of 25 cents to the clerk for the issuance of the permit. The law imposes a penalty by fine of \$50 or work for 30 days upon the streets of the city, either or both, in the discretion of the recorder.

A warehouseman contested the validity of the law and asked for an injunction preventing enforcement of the ordinance on the grounds that if he has to apply for a permit and then wait for three days before doing the moving and hauling for his customers, "tremendous trouble, annoyance, inconvenience and confusion would be caused to these customers; that they would in many instances transfer their property themselves, rather than wait for the warehouseman to comply with the terms of the Act; and that the law is unjust, dis-

criminatory, unwarranted, and illegal in specified particulars."

However, the Court refused to grant an injunction, saying:

"A court of equity should not exercise its extraordinary powers where there is no grave danger of impending injury. Bare fears of injury will not authorize such action. . . . Injunction is extraordinary process, and the most important one with courts of equity issue. It is well denominated 'the strong arm of equity.' . . . Injunction is not of right, but of grace; and to move an upright chancellor to interpose this strongest arm of the law he must have, not a sham case, but a well grounded complaint, the bona fides of which is unquestioned."

Liability for Stolen Coats

LEGAL EDITOR, *Distribution and Warehousing*: A party storing household goods brings into storage four coats to be stored with the household effects already in store. This party was to put these four coats into a cedar chest, but upon investigation found he did not have the key, and asked if he could leave them on top of the furniture, stating he would return in a day or two with the key and put the coats away. A few weeks elapsed, the man did not return with the key, and the coats in the meantime disappeared. Is the bailee liable for the loss of these coats, or is the bailor guilty of gross negligence?—*Atlantic States Warehouse & Cold Storage Corp.*

Answer: It is my opinion that you legally accepted the coats for storage when you gave your customer permission to leave them with you. This permission was either impliedly or expressly given but the results are the same, and I should say that you are liable for the loss resulting from lack of ordinary care. The fact that the customer explained that he intended to put the coats in the cedar box is only a subsidiary agreement relative to the location of the goods accepted for storage.

Carrier's Acceptance of Legal Delivery

LEGAL EDITOR, *Distribution and Warehousing*: Would like to have your opinion on the following question:

In the event we deliver merchandise to a railroad company and are not able to make delivery in full, as covered by the bill of lading, but on delivering the first load the bill of lading is left with the railroad company until the shipment is delivered complete, is the railroad company liable in the event of a fire between the time of delivery of the first load and the completion of the shipment?

Also, in the event that a shipment is made in the afternoon too late to make complete delivery and the goods lie at the freight house awaiting completion the next morning, the bill of lading having been delivered to the railroad company with the first load, and a fire occurs during the night, is the company responsible for the loss?—*Joseph Bim-*

berg Sons Storage Warehouse & Transfer.

Answer: The answer to your legal question depends on the intentions of the parties. In other words, if the carrier intended to accept delivery, it is legal delivery. As a rule, acceptance of a bill of lading is legal acceptance of the goods but it need not be conclusive if the parties intended otherwise.

The best plan to adopt would be to have the carrier's agent sign a receipt in which it is stated that the goods are accepted for shipment. This rule would eliminate controversy.

It is my opinion, in view of recent decisions, that in your case the carrier takes legal delivery when it accepts the bill of lading knowing that the delivery is not complete; but it is a question for litigation.

Owner Responsible for Payment

LEGAL EDITOR, Distribution and Warehousing: A customer stores merchandise with us and later on takes out a warehouse receipt in the name of a bank. We get the proper release from the bank and deliver the goods. The bank release does not say to deliver "upon payment of all charges" but simply to deliver. Can we legally hold the bank for the payment of these charges, if our customer does not pay?

If we deliver to a customer upon his order, all his merchandise, and then cannot collect our charges, and the same customer stores another lot of merchandise with us, can we legally refuse to deliver the second lot of merchandise until he pays us our charges on the first lot?—*Northeastern Warehouse Co.*

Answer: The legal owner of stored merchandise always is responsible for payment of storage charges. It is my opinion that if the bank is the legal owner, it is liable. However, in order to avoid litigation it would be advisable for you to have the bank issue an order in which it guarantees payment of the storage charges if the customer fails to pay them; otherwise there is a possibility that you would not be successful in collecting from the bank on account of the fact that it may be proved that you were familiar with the transaction and knew that actually the bank was not the legal owner of the property and was merely acting as trustee for the owner.

With respect to holding a second lot of goods for storage charges due on a former lot, this is positively *not* legal, because when you deliver possession of merchandise you lose your lien, and although the owner brings to your warehouse the same lot of merchandise you cannot hold it for previous charges.

Responsibility for a Broken Driveway

LEGAL EDITOR, Distribution and Warehousing: We told a customer that our trucks were forbidden to drive into private driveways on account of the

When you ship goods to a fellow warehouseman—use the annual Warehouse Directory.

weight and that we would not be responsible for breaking off driveway and would only drive there if the customer assumed the responsibility. When our truck arrived to deliver a load of furniture the customer had the driver back up to garage. The driveway was badly broken and had been for some time before our truck ever went upon it.

The owner of the property called at my office and wanted me to stand half of the cost for a new driveway 40 feet long. This, I think, is unfair to either the customer or myself, as the sidewalk was in need of repairing long before our truck ever drove upon it.

I think that the responsibility should rest with our customer, if there is any. What is your opinion, and who is responsible?—*Southwest Van & Storage Co.*

Answer: If you have proof that your customer authorized you to drive on the driveway, and assumed full responsibility, you can hold him responsible. However, this agreement between the customer and yourself does not prevent the owner of the property from looking to you for payment if the testimony indicates that you hauled the goods for a stipulated amount and retained control and authority over the driver.

In other words, if your customer agreed to pay you a certain amount for use of your truck and driver he was an "independent contractor," and he is personally liable, but if he merely "hired" you to perform the work he had no right to give orders to your driver nor did your driver have authority to take orders from him.

Obviously, at any rate you are not liable for more than the actual damages. As the driveway was broken previously, you are not required to construct a new driveway but only to repair it and put it in the same condition it was before your truck was driven onto it. (See 120 So. 10.)

State's Right to Tax Foreign Vehicles

LEGAL EDITOR, Distribution and Warehousing: We recently went to Waco, Texas, for a load of furniture coming to Tulsa. On the way back our driver was stopped at Denison, Tex., and we were forced to buy a Texas license. This was interstate business. Please advise if you think we can get a refund on this.—*Tulsa Fireproof Warehouse Co., Inc.*

Answer: I have been looking up the law regarding your legal question and I find that various Courts have held that although a transaction is interstate, a State may collect license fees for the use of the roads over which the motor truck travels.

Some time within the next few months

I shall prepare an article for publication in *Distribution and Warehousing* covering various phases of the law on this subject. It is established that laws written in a certain manner are not valid where a State intends to tax interstate business, but this rule is not applicable where a State simply requires payment of fees for use of public property such as highways.

With regard to the foregoing situation in Texas, B. Frank Johnson, secretary-manager of the Texas Warehouse and Transfermen's Association, recently mailed to the chambers of commerce in forty-seven border towns a proposed State legislative amendment which they were asked to back. The amendment would permit any foreign truck or bus to enter Texas on an "occasional trip" as defined in the present Act, but would not permit trucks or busses operating on a regular schedule, or remaining within the State, to evade the payment of a license fee to the State of Texas.

"Therefore," according to Mr. Johnson, "the evil formerly experienced of having Texas owners of commercial vehicles purchase a license in a neighboring State in order to save money would be avoided as such owners could not continually operate in Texas under this amended Act."

To the chamber of commerce Mr. Johnson explained:

"The Texas law does not provide for any reciprocal agreement with other States. We are informed that Oklahoma and Arkansas as well as Louisiana provide for the same treatment toward trucks of other States as such State offers to the trucks of that State. In this manner the law of these States automatically penalizes the operators of Texas who attempt to do business in other States."

"We feel the effects of this lack of reciprocity very keenly because of our Allied Van Lines operations, which is a national institution fostered and maintained by the National Furniture Warehousemen's Association, with which we are affiliated. Frequently our members in other States are picked up in Texas and compelled to buy a Texas license when they make only one or two trips into Texas during the course of a year. These Allied Van Line members operate only in the removal of household goods."

"It occurs to us that our border cities in Texas are penalized through the operation of this law due to the fact that the agricultural and other products of that region tributary to your city, but lying across the State line, cannot be marketed in Texas with the same freedom that would exist if we had a proper provision in our laws which would permit an occasional trip into Texas of trucks properly licensed by other States."

"Look into this situation, and if you can see your way clear to assist us in establishing such reciprocal relations we would be very grateful. A copy of a proposed amendment which, we believe, will correct this condition, is enclosed for your consideration."

H. A. Haring's

New Business for Warehouses

No. 63

Storing Bottled Gas for Domestic Use

CITY people look out upon suburban and country homes as they whiz past in their motor cars. They admire the wide stretches of open space which surround these homes; they mention the fine settings of lawn and trees; they are guilty, oftentimes, of envy for those who are able to escape the noise and confusion and nervousness of city conditions.

Seldom, however, do these fleeting observers use the word "courage" when speaking of such homes. Their omission proves that they have never tried the experiment of living beyond the limits of the city and its immediate environs. Nor do they so much as guess what it means to maintain a home far from the conveniences of a city. The advantages and the delights of such a home are apparent to the eye—wide spaces; fresh air; abundant sunlight; freedom from restraint; avoidance of noise and clatter health happiness. The disadvantages are not so

plain. Many of them do not emerge until long after the land has been purchased from the insistent real estate man—often not until the house nears completion.

Then it is that the countryside dweller begins to think of "courage." The day he moves his family from the city to the country, some courage is required. But, for the time being, the thrill of finally doing what they have looked forward to for months beclouds the hesitation they inwardly feel. The first weeks, even months, in the new home bring so many unexpected delights and hours of sheer happiness that difficulties are minimized in their minds. Yet, as the weeks drag on and as the parents suddenly realize that for all time to come they must face certain inconveniences, they learn what courage means. Then, like a starved man who must somehow "carry on," they figuratively draw up their belts one notch and smile—and make the best of it.

THE great conveniences of the city are ease of transportation, first and foremost; and, as a second group, the products of the utilities. These products are water, gas and electricity.

The poorer transportation of the country is never overlooked. Anyone who spends a day in the country can see what this means. It is a long way to work. Social engagements require either going to a distant place or getting friends to the country place. Children at school present even a more serious problem, for the reason that they are often too young to drive for themselves. Yet, with automobiles and a "second" or "third" car in the family, getting to and fro can be managed. Times there are when courage is necessary even for this matter—more frequently for carrying the children to school than for anything else; but few families are so stupid as to overlook this feature of living away from the city.

The automobile has, to a large measure, so completely annihilated the difficulties of transportation that the motor car has become the finest promotion we have for country living. Five miles out, even five times five miles, has become a mere nothing. Many of us live farther from stores and schools than we could have traveled in a whole day fifteen or twenty years ago. The map of the United States is laid out by counties, from coast to coast, each county having a county seat so located that it is not more than thirty miles from any place in the county. The idea behind this scaling of distances was that thirty miles

could be driven with a horse in a day. Therefore no resident was more than a day from the county treasurer and the county Courts. Today, however, Americans in millions live a greater distance from trading centers and from the place of the day's business.

No! it is not transportation that takes mountainous courage to live in the country. It is the loss of those three conveniences which the city householder draws from a "button" or a "faucet" or a "shut-off cock." Electricity, water and gas are the three things most missed.

Nowadays, too, the first two of these are generally available.

No modern man will think of a home without running water and abundance thereof. Electricity, since the war, has become common, because the linking together of the great power companies has carried the wire into remote parts. Even the backward southern States are wired, and a section is indeed rural that is without its power line. The State of Idaho, for instance, is the country's banner market for electric cooking stoves.

It is the third of these products of the utilities that the country home lacks: gas.

Gas, not for lighting the house, but for cooking, and, to lesser extent, for heat. Gas is the one thing most missed by the city family which moves to the country. The longer they remain, the more is the courage required to stay. To guests they speak slightly of the lack, making light of the inconvenience of other fuels for cooking, but, deep in their hearts, they envy the kitchen

where a fire comes from turning a knob!

The electric range may be had, of course. But it costs too much for ordinary families—too much for initial installation and too much for up-keep. Not only is there the cost of the range itself. To install it requires either a separate set of lead-in wires from the power line or a special transformer to step-up the voltage of the lighting circuit, and, for every connection used, special wiring of the most expensive and dangerous type. The cost, in a word, prevents general acceptance of electric ranges by families in moderate circumstances, except in such regions as the far western States where hydro-generated current costs so little that the savings quickly pay for the range and its installation.

The country dweller, therefore, faces only one alternative. Cook either with kerosene or with coal or wood. He has no choice as between these and gas. Gas for cooking is not to be had.

Coal or wood in the range is not bad in winter. The women folks forget those constant refuelings all day long and the removal of messy ashes once a day. They even try to overlook rebuilding the fire two or three times a week, when it "is lost" during the long night through inadvertence. Then, because the whole stove must be hot before the tea-kettle will boil, to cook over a range brings to mind all the comforts of a tiny gas flame in the city, where even the pilot light gives heat without making the wife hot.

The alternative is to cook with kerosene.

Distrib
ever
Smok
age to
sil; a
time
introc
cident
that
in the
that
runs
used
loved
"It
work
to fill
not.

The

A W
c
sene
them
quiet
to up
temp
Inv
out.
for th
new

Bot
tanks
made
throu
the t
the g
main.
gases
cerns
mann
so far

Gas
the g
may
city.
used.
smell
primi
poure
so lon
To pi
custo

Servi

AS
living
new
able,
at low
cies,
tank
it in
get a
no on

The
for th
gas, r
conne
cellar
the e
simple

But
wide
servic
Unf
these

Kerosene! What woman of this age ever has a good word to say for it! Smoke; bad odor; a flame that will manage to creep up and blacken every utensil; a burner that cokes and chokes every time something boils over; a stove that introduces terrible tastes to any food accidentally touching the oil; a contraption that goes wrong every time company is in the house; and, worst of all, a stove that just refuses to cook when the tank runs out of oil! Old John Burroughs used to say, when speaking of his "beloved oil stove" at Slabslides:

"It's a pretty poor thing that won't work once in a while when you forget to fill it!" But the kerosene stove will not.

The Way Out

A WOMAN, without the least doubt, could add to these faults of the kerosene stove. Too many of them first fret themselves trying to run a household quietly and serenely, with a terrible stove to upset the whole scheme, including tempers!

Inventive America has found a way out. Bottled gas solves the difficulty for those women who have heard of this new product.

Bottled gas means gas in cylinders or tanks, manufactured under pressure and made available without service pipes through the simple device of attaching the tank to the stove and then using the gas as though it came from the city's main. In addition to the manufactured gases, for these purposes, a few concerns prepare natural gas in the same manner. There is no essential difference so far as we here are concerned.

Gas in cylinders furnishes gas where the gas mains do not go. The kitchen may be arranged as compactly as in the city. An ordinary gas stove may be used. There is no dirt, no ashes, no smelly kerosene reservoir. There is no priming to be done and no liquid to be poured. The gas flows evenly and nicely so long as the container-tank holds out. To prevent failure of the supply, it is customary to have one tank in reserve.

Servicing the Tanks

AS must be at once apparent, gas in tanks solves the main difficulty of living in the country, but introduces a new one. Fresh tanks must be available, with dependable service of delivery at low cost. It is possible, in emergencies, for the family's car to load up a tank or cylinder from the dealer and put it in place at home. So is it possible to get a cake of ice and bring it home. But no one wants to.

The accepted way of distribution is for the local dealer to stock tanks of the gas, make delivery of a fresh container, connect it up to the piping system in cellar or behind the house, and remove the empty cylinder. This plan sounds simple. And it is.

But—and here lies the hindrance to wide introduction of gas in bottles—this servicing costs too much.

Unfortunately the manufacturers of these gases have been obliged to get local

representation where they could. The obvious dealer has been the plumber, or the hardware store, or the garage man. Grocers will not handle the commodity because, when stored in quantities in a storeroom, the insurance rate is high. Handled singly, as at the home, and stored outdoors, the rate does not go up. Other merchants find the same objection to handling the goods.

The hardware store installs furnaces. The plumber has workmen, and the garage, too. Each of these, however, is accustomed to charge for servicing on an hourly basis—a dollar or more an hour. To send out a man for such a job takes more time for the trip than for the work. It therefore results that the householder's inquiry of users of the new invention gets discouragement. They have not solved the problem of servicing without a cost that becomes burdensome.

Some of the manufacturers, however, have attacked this trouble. By arrangement with some truckman or deliveryman in each community they have regular routes established among users of the bottled gas of each brand. On a named day, the deliveryman appears at the home with a fresh tank. He places it on the rack behind the house, or carries it to the basement and lays it down at the right spot. He removes any tank that has been emptied and disconnected from the system—the fact of disconnection and open outlet being his sign that the tank is ready for return.

It remains, under this plan, for the householder himself to connect and disconnect the tanks to the system. To do this is not a task of moment. All that is necessary is to screw the nipple of the pipe to the proper cap of the tank and then open up the outlet of the cylinder. Specially designed devices assure that every possible unit of the gas will be exhausted from the cylinder before its indicator points to "Empty." When thus emptied, the householder merely reverses the operation of connecting up the supply. Attention once a week, even once a fortnight, is quite ample. Between times the stove is used exactly as in the city, with no more thought to this gas than to any other.

Cuts the Cost

FOR delivery of this sort the householder is invoiced the price of the fresh gas, plus an agreed sum per tank for handling in and out. The local dealer, with his high-pay mechanic and his costly delivery methods, is eliminated.

Here enters the public warehouse.

Fresh tanks of the gas, as handled by the local dealer, seldom are shipped in carloads. The dealer cannot dispose of a carload because he is in competition with other dealers who divide with him the local volume. But when the manufacturer has an arrangement with a truckman a carload becomes the logical unit of shipment.

Carload rates then become available. The saving in freight is very large, because gas in cylinders often is classified as First Class for rate making. This is,

indeed, the rating, in all three territories, for compressed gas "Not Otherwise Indexed by Name." Most of the manufacturers arrange, of course, to get the rating of acetylene gas in compression, that rate being Fourth Class in the Official and Western, and Sixth Class in the Southern, Classifications, when shipped less-than-carload. But, when carloads are possible, the rates drop to Fifth Class in Official, Sixth Class in Southern, and Class C in the Western, territories. For return of the empty containers, too, the carload gives a reduction—from Third to Fourth Class in both Official and Western, while remaining as Fifth Class in Southern for both L.C.L. and C.L. lots.

Thus the mere saving in freight means a reduction in cost to the householder, over what his local dealer is obliged to charge. This margin is enough of a spread to make the price, delivered in the basement of the home, under this method just what the dealer was charging for the gas itself. The savings in freight, in many communities, covers the warehousing and the delivery, as well as the pick-up of empties.

Such an arrangement has an immediate appeal to the owner of a country home, who would even pay a higher price for the one convenience he most wants.

Manufacturers

FOR the assistance of any warehouseman who desires to solicit this business we append a list of the principal manufacturers of bottled gas. The list does not claim to be complete, but it is reasonably so. The list may be quickly reduced, in any community, to the one or two makers who have introduced their product. Check it over either with your freight agents or with those dealers who handle the product. Distribution is sharply cut into marketing zones by freight rates and only a few makers attempt to do nation-wide business.

Carbide & Carbon Chemical Co., 30 E. 42nd St., New York.

Matheson Co., East Rutherford, N. J.

Rockgas Products Co., Pittsburgh.

Bastian-Blessing Co., Chicago.

Fuelite Natural Gas Corporation, Waltham, Mass.

Shell Oil Co., St. Louis.

Shell Oil Co., 100 Bush St., San Francisco.

Standard Oil Co. of California, San Francisco.

Sears, Roebuck & Co., Chicago.

Philfuels Co., Bartlesville, Okla.

Pittsburgh Thermoline Co., Pittsburgh.

Economy Bottled Gas Co., Miami.

Northwestern Blaugas Co., St. Paul.

Blaugas Co. of Omaha, Omaha.

Bradford Gasoline Co., Bradford, Pa.

Lone Star Gas Co., Dallas.

Imperial Gas Co., Long Branch, Cal.

Baltimore Gas Engineering Co.,

Charleston, Ky.

Skelly Oil Co., Tulsa.

Blaufame Gas & Range Co., Toledo.

Protane Corporation, Erie, Pa.

Kentucky Oxygen-Hydrogen Co., Louisville.

(Concluded on page 50)

Law of Delayed Payments and Bankruptcy

Thirty-seventh of a Series
of Legal Articles

By LEO T. PARKER
Attorney-at-Law

ACCORDING to the decisions rendered by our Courts the bankruptcy laws originally were formulated to relieve persons of debts contracted in good faith. Therefore the bankruptcy laws are not effective with respect to persons who exercised any degree of fraud or dishonesty to obtain credit and then become insolvent.

It is well established, however, that bankrupt laws are construed liberally by the Courts for the purpose of releasing unfortunate and insolvent debtors from debts honestly incurred. (30 F. (2d) 674).

To release an honest, unfortunate and insolvent debtor from the burden of his debts and to restore him to business

activity, in the interest of society, is one of the important objects of the law, as much as to distribute his assets among his creditors. Generally, the laws are construed liberally in favor of the debtor, if he faithfully presents his claims.

Yet it is well settled that a debtor who intentionally files an untrue financial statement may be denied a discharge in bankruptcy. Moreover, few persons realize that a warehouseman, or other business man, who assumes a debt without fraudulent intent, cannot obtain a discharge under the bankrupt laws if the equivalent of fraud is present.

FOR instance, the Supreme Court of the United States in *Morimura, Arai & Co. v. Taback*, 49 S. Ct. 212, established the law that carelessness in filing an incorrect financial statement is equivalent to fraud and prevents discharge of the debtor in bankruptcy.

The facts of this case are that two business partners rendered an incorrect financial statement. Relying on the contents of this statement, various firms extended credit to the partnership. Several months afterward the firm became insolvent and was adjudged bankrupt.

During the bankruptcy proceedings the creditors requested the Court to disallow the partners' petition for discharge of the debts, on the contention that, irrespective whether the incorrect statement was filed intentionally or carelessly, it accomplished the same results and enabled the partners to defraud creditors.

It is interesting to observe that the Supreme Court refused to discharge the partners in bankruptcy, thus resulting in this debt remaining forever against them until paid. This Court said:

"It is established by the clear weight of the evidence that the written statement . . . was not only incorrect but materially false within the meaning of the Bankruptcy Act; that is, that it was made and acquiesced in either with actual knowledge that it was incorrect, or with reckless indifference to the actual facts, without examining the available source of knowledge which lay at hand, and with no reasonable ground to believe that it was in fact correct."

Intentional Fraud

OBVIOUSLY, therefore, an intentional rendering of an incorrect financial report will result in the person being unable in later proceedings to obtain a discharge in bankruptcy, should he become insolvent. Moreover, it has been held that the seller may recover possession of his goods.

For example, in *Barber v. Whitaker Mfg. Co.*, 20 S. W. (2d) 864, it was shown that a seller refused to ship goods ordered unless the purchaser furnished a financial statement. The prospective purchaser wrote a letter as follows: "Our financial condition is a great deal better by about \$45,000 now than it was July 1st. . . ."

Relying on the truth in the letter, the seller shipped the merchandise. Soon afterward the buyer became bankrupt and the seller promptly filed suit to recover possession of the merchandise. It is interesting to observe that the Court held the seller entitled to take back the goods, stating the following important law:

"If a buyer knowingly makes false representations concerning material facts, and thus induces the seller to part with his goods, the seller may elect to avoid the sale, and this without regard to whether the buyer intended to pay for the goods or not. The fraud in such case consists in inducing the seller to part with his goods by false statements to the buyer known to be false when made, or made by him when he has no reasonable ground to believe that they are not true. When the bankrupt made

his statements to the commercial agencies, he knew that they were intended to be furnished to the wholesale trade for the purpose of determining a basis of credit for him."

Concealment of Assets

ANOTHER important point of the settled law is that for a bankrupt to have a valid discharge in bankruptcy the evidence must prove that he acted honestly throughout the bankrupt proceedings and prior thereto. In other words, any testimony proving beyond a reasonable doubt that the bankrupt concealed assets, with the intention of obtaining possession of the valuables after being discharged in bankruptcy, justifies a Court in disallowing the claim.

For illustration, in *Lawland v. United States*, 33 F. (2d) 582, it was disclosed that a bankrupt partnership purchased a large quantity of merchandise. Later they were adjudged bankrupts and, when explaining the disappearance of certain goods, they testified that a great deal of valuable merchandise had been stolen from their warehouse about two months before by some one who forced an entrance through the door.

The partners failed to submit convincing proof that the warehouse had been burglarized, and the Government introduced circumstantial evidence which only tended to prove that the partners had taken possession of the property and were intending to convert it to their use after obtaining a discharge of bankruptcy.

The partners attempted to avoid liability on the ground that positive evi-

dence was not introduced proving that they had misappropriated the goods. However, the higher United States Court held the partners guilty of concealing assets, and said:

"The proof for the Government tends to show that no such entrance or robbery occurred. It is true that before there can be a conviction under this statute . . . there must be proof of a concealment during bankruptcy. It is not necessary, though, that the goods be discovered in the possession of the accused. It is sufficient if there is substantial evidence of facts which exclude every other hypothesis."

On the other hand, it has been held that an unexplained shrinkage in assets that occurred a year prior to the adjudication in bankruptcy is insufficient evidence to prove concealment of assets. (20 F. (2d) 36). Therefore, the testimony must prove beyond a reasonable doubt, in the minds of reasonable and prudent persons, that the assets were actually concealed; otherwise a higher Court will not uphold a lower Court's decision rendered in favor of the creditors.

Another important point of the law is that proof that a bankrupt testified falsely regarding assets prevents his honorable discharge.

For instance, in *Wald v. Longacre*, 34 F. (2d) 25, it was disclosed that during bankruptcy proceedings a bankrupt testified that he had borrowed \$7,500 from relatives when he established his business. In view of the fact that it was proved that he had borrowed only \$1,500 the higher Court sustained the lower Court's decision and refused to honorably discharge the debtor, saying:

"The discharge of a bankrupt is regulated by the Bankruptcy Act. He is, as a matter of law, entitled to his discharge, unless he has committed some act set forth . . . preventing it. . . . A careful reading of it leads to the conclusion that this bankrupt is of that exasperating type who because of moral obliquity does not seem to recognize any difference between truth and falsity and will say anything which the impulse of the moment prompts him to say because thought to be to his benefit to have said."

Previous Irregularities

UNDER certain well defined circumstances, misconduct or fraudulent acts done several years prior to the time a person seeks a discharge in bankruptcy will justify a Court in refusing to approve the discharge.

The leading case on this point is *Weinstein*, 34 F. (2d) 964. Here it was disclosed that four years before a person filed a petition for a discharge in bankruptcy he had signed a false and fraudulent statement to obtain credit. Although the false financial statement was not given to any person claiming to be a creditor in the bankruptcy proceedings, the Court held the debtor not entitled to a discharge and explained the law on this subject in the following language:

"Discharge from debts is a matter of

favor, and not a matter of right. Honesty on the part of a bankrupt is rewarded by a discharge. Fraud and dishonesty are stamped with disapproval of a discharge. . . . The bankrupt, by his own premeditated conduct, having been the cause of the situation in which he now finds himself, must extricate himself from his self-created difficulties, and is not entitled to either a technical or equitable ruling in his favor to accomplish that purpose."

Transfer of Assets

AS previously explained, proof that a bankrupt concealed, assigned, conveyed or sold his property for the purpose of defrauding his creditors prevents an honorable discharge in bankruptcy. Also the bankrupt's creditors may recover title to the property if the facts surrounding the conveyance or sale indicate that the purchaser knew, or by the application of ordinary care should have known, that the seller was insolvent. The same law is effective with respect to a person who holds a mortgage on the bankrupt's property.

For example, in *Unger v. Mayer*, 147 Atl. 509, it was shown that six months

Next Month

THE liability of a municipality for negligent damage to warehouse and stored goods will be discussed by Mr. Parker in his next article, to appear in the March issue.

The text will touch on the responsibilities of fire departments, water companies, sewerage systems, gas and electric utilities, etc.

Mr. Parker will review recent higher Court decisions involving various phases of liability of municipalities.

before a man named Mayer was adjudicated a bankrupt he mortgaged his real estate, valued at \$24,000, to his father. Two months prior to becoming a bankrupt he sold the property to his brother-in-law.

Certain creditors contested the validity of the mortgage and the sale on the grounds that Mayer knew he was insolvent on the dates that he signed the mortgage and sold the property, and that his father and brother-in-law should have known it. It is interesting to observe that the Court held both the mortgage and sale void, and said:

"Circumstances such as would put a reasonable person upon inquiry with respect to the financial condition of a transferer will charge creditors or others dealing with a failing debtor with such facts as they would have learned had they properly investigated. . . . Considering the testimony as a whole, I am convinced that both the father, the mortgagee, and the brother-in-law, the grantee of the deed, knew when these instruments were executed that Mayer was insolvent. I find this to be the fact."

Ownership

OBVIOUSLY, merchandise held in trust, or on consignment, by a bankrupt is not deemed to be his legal assets, and the seller may recover possession of his property. Still another important point of the law is that goods held in a warehouse in trust or on consignment may ordinarily be recovered by the owner although the bankrupt misappropriated them. Moreover, a person who obtains goods from a purchaser, who has illegal title to the merchandise, is responsible to the owner for redelivery of the goods.

A far-reaching effect of this legal rule is found in the recent case of *National Co. v. Empire Storage & Ice Co.*, 19 S. W. (2d) 565. Here it was disclosed that a purchaser ordered a quantity of goods through a broker. The seller shipped to the broker a greater quantity of merchandise than the purchaser had ordered. The broker delivered the bill of lading to the purchaser, who sold a portion of the shipment he had ordered and stored the balance in a warehouse and received a negotiable warehouse receipt. The purchaser borrowed money and gave the warehouse receipt as collateral.

Subsequently he became a bankrupt and the seller filed suit against the warehouseman to regain possession of the goods. The warehouseman attempted to avoid liability on the contention that he acted in good faith in issuing the warehouse receipt and believed that the purchaser actually had legal title to the merchandise. Nevertheless, the higher Court held that, under these circumstances, the manufacturer may rightfully repossess the goods or the full value thereof, stating important law as follows:

"An action of conversion will lie against the warehouse company, because it took no greater right, title, or interest than that of its assignor. One who receives the possession of personal property from another, who has no title thereto, must answer to the real owner, even though he receives it without any notice of the defect in the title. The fact that the warehouse company issued a negotiable warehouse receipt does not change the rule."

Federal vs. State

IT is important to know that the Supreme Court of the United States in *International Co. v. Pinkus*, 49 S. Ct. 108, recently rendered a decision holding that States are without power to enact and enforce any law regulating distribution of an insolvent debtor's property, because Congress has established Federal laws that supersede State laws.

In this case an insolvent debtor, in accordance with a State law, surrendered his property and other assets which were distributed among his various creditors, and the State Court fully discharged him in bankruptcy. Later another creditor, who had sold the bankrupt \$463 worth of goods, filed suit, contending that the discharge was illegal because the State law conflicts with the national

Bankruptcy Act. Although the higher Court in the State held the suit without foundation, the United States Supreme Court reversed the verdict and, in holding the creditor entitled to collect the account, said:

"A State is without power to make or enforce any laws governing bankruptcies that impairs the obligation of contracts or extends to persons or property outside its jurisdiction or conflicts with the national bankruptcy laws. . . . States may not pass or enforce laws to interfere with or complement the Bankruptcy Act or to provide additional or auxiliary regulations."

Therefore, this Supreme Court case clearly establishes the law that a discharge in bankruptcy under State laws, which conflict with Federal laws, is illegal and void.

Presenting Drafts

WHERE a creditor receives a check or draft, the presumption is that he receives it as conditional payment, and that it does not operate as absolute payment. But, where he negligently fails to present it within a reasonable time, and it would have been paid if presented within a reasonable time, he thereby makes the instrument his own, and it operates as payment at least as to third parties.

For illustration, in *Pohl v. Johnson*, 229 N. W. 555, it was shown that O. A. Johnson, doing business as O. A. Johnson Elevator Co., operated a public grain warehouse under a license from the State. A surety company was the surety on his bond as such warehouseman. The condition of the bond was to the effect that Johnson would comply with all the laws of the State relating to the duties of a public warehouseman. Under the laws of the State, where grain delivered at a public warehouse is not purchased, but received for storage, the warehouseman receives it as a bailee. He is required to issue storage tickets therefor obligating him to return grain of a like kind, quantity, and grade on presentation of the storage tickets and

payment of certain specified charges.

Johnson had an arrangement with the C. C. Wyman Co. under which he bought grain, and the Wyman company furnished the money to pay for it. He made daily reports to them of the grain purchased, and issued to the sellers grain checks for the purchase price. These grain checks were in substance drafts on the C. C. Wyman Co. They were usually deposited in a local bank and paid through the usual banking channels.

In January and February a man named Pohl delivered wheat to Johnson at the warehouse, and received the usual storage tickets for it. In April he sold the wheat to Johnson, delivered the storage tickets to him, and received a grain check or draft on the C. C. Wyman Co. for \$519.70, the admitted value of the grain. On June 13 Johnson, having shipped out all his grain, closed his warehouse and quit business. He was then indebted to the C. C. Wyman Co. in the sum of \$9,000, and was insolvent.

Pohl retained the draft in his own possession until June 21, a week after Johnson had quit business, and more than two months after he had received it. On June 21 he presented it at a bank, and payment was refused. Thereafter he made a demand for the grain or the money, and then brought suit against the surety company on the bond.

The surety company contended that when Pohl sold the grain to Johnson and surrendered the storage tickets and received the draft, the bailment terminated; that the grain became the property of Johnson; and that liability for it under the bond ceased. The surety company contended also that, even if the draft was conditional payment only, Pohl's negligence in not presenting it for payment for more than two months released the former from liability for the grain on the bond.

In holding the bonding company not liable, the Court said:

"The sale of the grain to Johnson was what is termed a cash sale. When plain-

tiff accepted the grain check or draft for the purchase price, the sale was completed, subject only to the condition that the instrument be paid if presented within a reasonable time. Where a check or draft is accepted for the purchase price on a cash sale, the seller must exercise reasonable diligence in presenting it for payment, and his failure to do so will operate as a waiver of his right to rescind and reclaim the property for non-payment."

Deposit Checks Promptly

OBVIOUSLY, a warehouseman who fails promptly to present a check given in payment for an account may find himself a legal creditor of the payor of the check where the latter becomes bankrupt. Also, if the bank, on which the check is drawn, becomes insolvent before presentation of the check for payment, the warehouseman may suffer financial loss.

If the warehouseman and payor reside in the same city, the former should present the check to the bank, on which it is drawn, within twenty-four hours to forty-eight hours after he receives the check. If he fails to do so the payor is not obligated to repay the amount if the bank closes its doors before payment is received.

For instance, in the leading case of *Davis v. Benton*, 2 OH. D. C. 329, a check was given by a payor on June 23. The holder failed to present it until June 25. The bank closed June 24, and this Court held the holder not entitled to receive another payment from the payor as he should have presented the check not later than June 24.

Another important rule of the law is that the time for presentment of a check is not changed by reason of clearing house rules. Therefore, if a warehouseman presents a check for payment at the bank with which he transacts business instead of the bank on which the check is drawn, he does so at his own risk and the time for presentation at the latter bank is not extended. (8 C. J. 753.)

Lord Macaulay in 1830 Looked Ahead One Century

An Essay of Interest to

Thinking Men in 1930

IN a four-page document, finely printed and in two colors, which the St. Louis Refrigerating & Cold Storage Co. has been distributing widely to the public, one of Lord Macaulay's essays, "Southey's Colloquies," published in January exactly a century ago, is quoted at length as a timely contribution to the psychology of the business conditions of the present day.

"When read one hundred years later," the St. Louis company suggests, these excerpts from the writings of the earlier English historian, essayist and statesman "are of deep interest to thinking men."

The excerpts follow:

"History is full of the signs of the natural progress of society. We see in almost every part of the annals of mankind how the industry of individuals, struggling up against

wars, taxes, famines, conflagrations, mischievous prohibitions, and more mischievous protections, creates faster than governments can squander, and repairs whatever invaders can destroy. We see the wealth of nations increasing, and all the arts of life approaching nearer and nearer to perfection, in spite of the grossest corruption and the wildest profusion on the part of rulers.

"The present moment is one of great distress. But how small will that distress appear when we think over the history of the last forty years; a war, compared with which all other wars sink into insignificance; taxation, such as the most heavily taxed people of former times could not have conceived; a debt larger than all the public debts that ever ex-

(Concluded on page 52)

MOTOR FREIGHT

Reg. U. S. Patent Office

FOR the busy executive of a warehousing business who is keen to keep abreast of the times there are several important new things to think about in the field of motor freight. Developments are following one another at a rapid pace, and all have a distinct bearing on the cost and opportunities of handling the hauling requirements of any warehouse business, regardless of its size. There are many advancements being made on the manufacturers' side of the industry, and some of these will be discussed in this department, which is conducted

By Philip L. Sniffin

THIS MONTH

Let Your Trucks Do Their Part Toward a Better 1931

HERE is a tip for the warehouse owner who knows how necessary it is now to eliminate the headaches of business details—who wants plenty of time for planning and pulling the strings of sales, credits, finances, manoeuvres for plant economies and the other phases of management that will be so important in this year 1931:

Profit by the experience of other firms which have met and solved the bug-a-boo of truck up-keep expense. Spend a few days now in establishing a definite policy for the care of your vehicles. Put a plan in operation which will enable your trucks to do their best work at the minimum of cost.

As a help toward devising such a plan, let us summarize some of the more important points of previous articles which have to do with truck maintenance plans.

Remember that each time a motor truck is taken out of service for repair work, the investment in the equip-

ment becomes idle for that period; the service is interrupted, and an expense is incurred for the actual work to be done.

Here is one element of motor truck use which involves more unnecessary extravagance than any other part of the truck operating plan. The cost and inconvenience caused by break-downs, faulty engines and chassis troubles are variable items, depending not so much on the vehicles themselves as on the way in which they are operated and maintained.

Much can be done toward reducing motor truck expense by studying and experimenting with the different systems or methods that can be used. One concern, for example, in the writer's observation, after experimenting with many maintenance systems for its 22 trucks, has finally arrived at a plan which has saved over \$5,000 in the repair parts account alone over a period of two years.

THE basis of this particular system is that each truck in the fleet is assigned to the repair shop one day each month for a complete inspection and to have all repairs made. If, after inspection, it is found that the repairs required will take more than one day, the truck is assigned to the repair shop until the repairs are completed. The records show, however, that the extra time is seldom required.

The following is the routine for the inspection and repair of a truck.

The vehicle is first given a test run by the chief mechanic. This is to locate trouble which might show up when the truck is in motion, but which might slip by if the car were merely looked over. It is next given a thorough inspection. Notations of repairs to be made and parts to be replaced are made during this inspection. After inspection, the detail work, such as carbon cleaning, valve grinding, greasing and oiling, tightening up of bolts and minor adjustments, is assigned to the junior mechanics, while the major repairs and adjustments are handled by the chief mechanic.

Under this system it is possible to keep a fleet in the very "pink" of condition with a minimum of effort and expense; and, with this monthly inspection and close contact with each truck, the

company is able to get the maximum wear out of the parts with the minimum of breakage before they are replaced.

Repairs

ANOTHER policy of truck up-keep which has brought good results, for a company using 36 large trucks, holds to this rigid standard of efficiency and appearance:

The drivers are given time to do the lubricating and washing. This allows them to show a pride in the appearance of their vehicles and an opportunity to inspect and report any possible failures. A member of the repair force makes any further necessary inspection.

After every 5,000 miles of operation each truck is sent to the repair shop for minor repairs such as carbon removing, valve grinding, change of lubrication in the gearset, rear axle, necessary tire changes, relining brakes, inspection of wheel-bearing adjustments, and inspection of general lubrication.

Each truck is completely gone over after every 40,000 to 45,000 miles of operation. The unit system of overhauling is used. Besides replacing the engine, gearset, rear axle and steering column with units already overhauled, the chassis is tightened and re-

inforced wherever weak conditions are found.

The tires, paint and unloading equipment, as well as the mechanical conditions, are constantly under the inspection of the maintenance superintendent.

The majority of trucks in this fleet are used on short haul work only. There are periods during the year when the trucks are not constantly needed. During these convenient periods the major repairs and painting are attended to. On rush days only urgent repairs are cared for.

A Service Truck

ONE of the features of another firm's system is completely equipped service truck. This represents an investment of approximately \$5,000. It is in charge of an experienced mechanic and is fully equipped with tools, extra parts, etc., so that it may handle any road troubles in which the company's trucks may find themselves.

The company has figured out that in answering only ten emergency calls from its trucks in one year the depreciation and interest on the investment will be taken care of: that is, it would cost an amount covering these items to hire others to do the work. When it is considered that during a recent rainy period



Mounted on a White Model 65 A bus chassis, this de luxe aluminum van built by Gerstenslager for Anderson Bros., Red Bank, N. J., is for transport of horses. Centrally located on each side is a 48-inch double side door. A reversible ramp carried crosswise under the body is utilized for unloading. There are four removable partitions which provide three stalls for hauling three horses in each end of the body, which is 19 feet long, 96 inches wide outside, and 7 feet 2 inches at center. Body and stalls are padded. The body is painted a brilliant red with medium yellow streamline and wheels, with gold leaf lettering.

this service truck pulled seven trucks out of difficulties in one week, the wisdom of purchasing the truck becomes apparent.

"Some idea of the equipment we carry on our service truck may be gained from the fact that we have never taken more than fifteen minutes to get any one of our trucks under way after we arrived on the scene," to quote an officer of the company.

The mechanic is solely responsible for the running condition of the vehicles. Drivers are given specific instructions that they are to attempt no repairs of any kind. When a truck breaks down in service, the driver telephones for the mechanic, and the mechanic leaves immediately to make the repair. His knowledge of each vehicle and his ability to detect the symptoms enable him to locate and remedy the trouble at once. The plan returns a worth-while saving in the driver's time and in the time of equipment, as well as in the total yearly cost of repair work. Furthermore, it makes far more dependable service to the customers—a factor of greatest importance.

Experience

SOME interesting and valuable points on the truck repair problem may be cited from the experience of the National Oxygen Co., Chicago. H. G. Austin of that company, addressing a convention of the International Retail Association, emphasized points so generally applicable to average conditions that they are worth repeating here.

"In our business," according to Mr. Austin, "our machines are subjected to serious overloading and more or less careless handling, which are elements that are difficult to analyze correctly in considering the cost of up-keep in so much as they have to do largely with an indifferent human element.

"We find, for instance, that the general make-up of the driver of the truck has perhaps more to do with its con-

dition than any other element. As a result of this very apparent condition, we have endeavored to select drivers who actually possess mechanical skill, where it is possible to do so.

"Furthermore, we have attempted to encourage the driver to make as many of his own repairs and corrections as is possible by keeping a close record on the amount of repair bills actually created from outside sources. We have obtained good results by checking up with the driver frequently on these elements and attempting to show him where he could have corrected a great many of the defects himself rather than laying the truck up to have it done by outside parties.

"We have adopted another rule which has been a considerable saver of expense, in requiring that the driver, each night when he is through, make a careful examination of his truck to see whether his oil was working properly and whether all parts requiring lubrication were receiving it in proper quantities; tightening up any loose parts that might be in evidence; and in general giving his truck a first class once-over each day after he has come in.

"We find this latter suggestion to be productive of perhaps the greatest saving in repair bills and also interruption of service. If the driver knows his truck is in good condition for use the next morning, he probably saves a great many repair bills that would otherwise develop by reason of improper inspection of the truck.

"One other element entering into the cutting of repair bills is in having the same man drive a truck continually, rather than having changes in the driver on the same truck; as we have found that, after a driver gets familiar with his truck, there are a good many things about it that he has discovered that might be unknown to a strange driver and might not be caught in time to prevent considerable repairs as a result of this lack of information."

Is Overhaul Necessary?

THERE seems to be a growing feeling among those who superintend the operations of truck fleets that a maintenance system should properly eliminate or prolong the usual overhaul expense. This is well expressed by one operator, who says:

"We feel that a weekly or monthly inspection is far preferable and less expensive than any other system of handling maintenance. Our opinion is to the effect that the necessity for regular and complete annual overhaul may be practically done away with by having regular inspections whereby small defects will make their appearance and be quickly remedied at little or no expense. Thus is eliminated the necessity for buying new parts where tightening of a bolt or something similar may take care of adjustments found necessary."

Another operator says:

"We try to keep our trucks on the road at all times, as we have found that by keeping them in our garage for a complete overhaul our work is delayed to such an extent that it is better for us to make small repairs from time to time.

"Our trucks are inspected weekly and monthly, and in most cases we have found that all they require to keep them going is to regrind the valves occasionally and make a few minor adjustments.

"Our experience has been, and is at the present time, to allow our trucks to run as long as possible before we give them a thorough overhaul. This does not mean that we allow them to go until they are complete wrecks before we overhaul them, but we have trucks out in service for more than two years which have not been thoroughly overhauled, except for minor repairs made from time to time as our superintendent of the garage called them in to have such work done.

"We have found in many instances that, by making a small repair, the truck will be placed in first class running order for another eight or ten months' service before it requires any attention whatever."

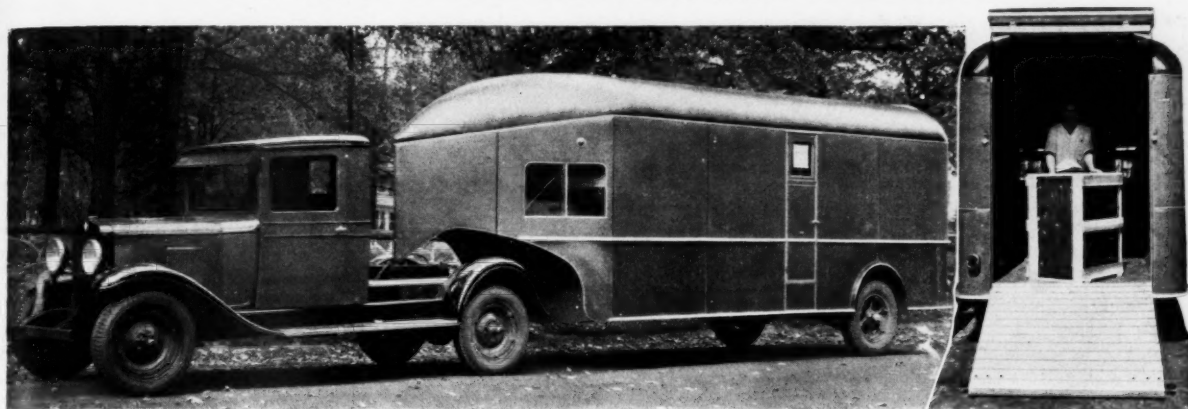
If a fleet operator is equipped to maintain a rigid periodic inspection system, then it will be possible to dispense with annual overhauls and their resultant loss of time in dismantling and reassembling the vehicles. Advocates of the "stitch-in-time" policy claim that the periodic overhaul is unsound, in that it is based on an even wear of all parts. As there is no uniform depreciation of wearing out of these parts, annual overhaul will not produce the economical benefits for which it is intended.

Painting

NOT the least important feature of a truck up-keep policy is the necessity for keeping the vehicles clean and well painted.

When a truck comes from the factory it is well protected with paint and varnish. This coating in time begins to show signs of wear—not because the ma-

Principles of Aeronautical Engineering Applied to Moving Van



WHEN the late Glenn H. Curtiss invented the now well known air cushion coupler he started a new era in the field of transportation. This device made possible larger cubic capacity and at the same time permitted lighter construction of vehicles to be propelled by automotive means.

True to his early beliefs, and certain in the light of his vast experience, he designed a new type of body construction wherein the stresses and strains were all carried through a system of trusses and cantilevers. It expressed the aircraft art applied to a road vehicle.

Those principles of aeronautical engineering in which maximum structural strength is obtained with a minimum weight, have been successfully employed in the Curtiss Aerocar.

And this Aerocar principle has been applied to the building of many types of cars and vans to be used for various purposes. One is a large model making an ideal van for the hauling of bulky, easily damaged merchandise. It may also be used for general van purposes.

Struts and longerons are of oak and spruce; all bowed members of laminated spruce; fittings of pressed steel.

The power plant may be any close coupled truck chassis which the company's engineers alter so that the air cushion coupler can be attached rigidly to the frame 12 inches or more ahead of the rear axle. The nose pin of the Aerocar body fits into the center of the air cushion coupler and becomes the pivot on which the power plant and Aerocar body turn.

Turning Curves

The rear wheels of the power unit do not pull but push the coupler nose of the Aerocar and as a result the rear of the Aerocar will not whip, skid or side sway. For the same reason it is possible to take curves at higher speeds than would be possible with the power plant alone. This arrangement also permits the driver to back in any direction at will.

The inside height of this model is 86 inches; the approximate weight is 3700 pounds.

One of these models, illustrated herewith, has been in steady use over a period of sixteen months and has not been an expensive van to operate. The operating expense has averaged 25 per

cent less than a three-ton tram truck.

The features, which are the same in all Aerocar models, whether of the aerocoach, waste truck, travelling car or other type, included light weight, large capacity, and strength in construction.

Still another decided advantage is the fact that the freight body may be quickly detached from the power unit and another power unit of like character substituted. The advantage of this will be recognized from the fact that in case of a breakdown or overhaul it is not necessary to withdraw the entire equipment from service. This results in a direct saving of operating cost.

Because of the light construction, minimum unsprung weight, and absorption of road shock and motor vibration, by the air cushion coupler, the maintenance cost of both the merchandise and power sections is minimized.

Another factor which makes for lowered maintenance cost is the fact that the entire frame is waterproofed. Because of this rot, rust and corrosion are all but eliminated.

The vans are being manufactured by the Curtiss Aerocar Company of Florida, Inc., at Opa-Locka, Florida.

materials used are of inferior quality, but as a direct result of severe service and indifferent care.

Many companies have been known to specify repainting with relettering at regular intervals, according to the severity of service. In addition to the advantages of better appearance incidental to proper painting of the vehicles, it is true that it is ordinarily cheaper to paint than not to paint. A protecting coat of paint conserves the body, cab and exposed portions of the truck. Vehicles are subjected to the wear common to all running objects; they are exposed to all kinds of weather. They become heated and are cooled by chilling rains and snow; the nature of the service they render necessitates contact with mud and dust; they come in contact with platforms, conveyances, fences, etc. Consequently, they deteriorate more rapidly than buildings on a fixed location, unless they are kept in condition by some

rust and decay preventive such as paint and varnish.

Every operator who maintains his own garage should install a wash rack and then see that provision is made so that drivers will use it regularly. It will be worth while to put aside a definite amount of each driver's time so that the trucks will receive a thorough cleaning at regular intervals. By a thorough cleaning is not meant merely going over the truck body, but getting under the truck and washing the parts where dirt, if accumulated, is liable to enter places where it will cause damage.

There is a double purpose in washing a truck: first, to keep it neat-appearing for the sake of the impression it will make on the street; second, to prevent rust and damage through dirt and grit entering vital parts. Therefore washing to be thorough must include the whole truck, taking in the engine and parts underneath truck, as well as the body.

Motor truck owners should also impress on their drivers that it pays to keep a truck engine clean. It is a matter of experience that clean engines work better than dirty ones. It is difficult to explain convincingly why this is so. It is partly a problem of morals, but there are small practical reasons, too, which make a clean engine worth while.

In the first place, a clean engine is likely to receive better care, as a clean engine demands better care. This is psychology. In the second place, a clean engine will get more attention because it is more pleasant to work around it. Third, defects show up much more quickly on a clean engine. The stitch in time is discovered and is remedied much sooner on a clean engine than a dirty one. Grease and dirt cover things up. On dirty engines serious breakages often occur simply because oil and grime hide the trouble during the incipient

Louisville Company Advocates Use of Semi-Trailer



EVERY warehouseman realizes that it is a tough job to operate a big expensive van and still make money on actual removal work.

The Fireproof Storage Company, Louisville, Ky., under the managership of W. L. Stodghill, has recently added a piece of rolling stock which puts the firm's removal work on a really paying basis and at the same time provides great advertising value.

The Louisville company has long used trailers. Its first trailer van has now travelled nearly a hundred thousand miles—58,000 miles on its original set of tires.

Mr. Stodghill installed motor haulage service for the company three years ago. Prior to that time the business had been entirely that of storage. With the installation of the new motor service came a big Fruehauf van semi-trailer. It proved to be not only a money earner but a money saver as well, according to Mr. Stodghill. It was big, impressive, but it did not possess the sweeping lines of a handsome truck, and the space between tractor-truck and trailer was too great.

When the Fruehauf Trailer Company introduced its new bus-type furniture van semi-trailer, Mr. Stodghill placed his order for one of the largest sized units built—1400 cu. ft.

This new fireproof van trailer has a rounded front end and a sloping bus-type roof. Because of the rounded front end it is coupled extremely close to the big White tractor-truck—scarcely more than a hand's breadth separates trailer and

tractor, this enhancing the beauty of the vehicle.

The frame of the trailer has a drop of 19½ inches far enough back of the front end to clear the tractor-truck. This lowers the center of gravity materially and permits of a larger capacity body without increasing the overall height of the unit. The latter point is important because of low bridges in and around Louisville. Power brakes give the driver full control and permit of high road speed with safety.

The new Fruehauf is declared to have exceptionally fine riding qualities partly because of its low center of gravity and partly because of the greater amount of rubber carrying the load and also because of the flexible fifth wheel mounting which connects it with the tractor-truck. This is important in handling expensive household goods, pictures, pianos, glassware, etc.

Mr. Stodghill pioneered the van semi-trailer in his part of the country. He was told that such equipment was not practical in certain sections but he has found that his trailers can go anywhere.

When the new Fruehauf van arrived in Louisville it came in for a great deal of attention. Every time the driver stopped, the unit drew a crowd of curious admirers. Practically overnight a demand for the new van developed and people called up and asked for "the big trailer van" to make their removals.

The van is used mostly on long runs and is extremely profitable because it is often possible to move two households on one trip, according to Mr. Stodghill.

stage. Finally, dirt is likely to work itself into wearing parts, and obviously the less of it there is present, the less there will be to cause trouble.

It is a good plan, therefore, to wipe or wash the engine off with a rag moistened in kerosene or gasoline. It is advisable to do this work in the open, and the car should not be run again until all fumes have been dissipated.

Lubrication

NO discussion of truck up-keep policies would be complete without reference to the necessity for systematic-

ly taking care of lubrication. This factor of maintenance has more effect than any other on the serviceable life of the equipment.

To emphasize this point, let us briefly summarize an argument given in a previous article. The following is a table which shows the average percentage of operating costs covering several hundred trucks. While the figures are not to be taken as applicable to any individual case, they represent fairly well the division of expense incurred in operating a motor vehicle under the most general

conditions. The percentages are as follows:

Gasoline, 23.21%.
Depreciation, 21.76%.
Repairs, 17.06%.
Tires, 15.16%.
Garage, 14.31%.
Interest, taxes, insurance, 6.49%.
Lubrication, 2.01%.

It is apparent from these figures that in attempting to save on lubrication the cleaner is picking the very lowest item of cost. Even if he could save it all, he would be better off by only \$2 out of every \$100 he spends to run his truck.

The proper use of lubricants will help to minimize the expense of depreciation and repairs which share a large proportion of the total. The crankcase should be drained, cleaned and refilled at regular intervals. Oil must be added as required to maintain the proper level. The transmission will also require regular attention and should be drained, cleaned and refilled at least once a year.

There is no reason why a good grade of truck, properly maintained and consistently operated, should not give ten to fifteen years of economical service.

Truck Manufacturers Say Increased Taxes Would Burden Shippers

TAXES on commercial motor vehicles are so high that they are threatening the development of highway transportation, according to a statement issued at the close of a meeting of leading truck manufacturers on Jan. 6 in the New York headquarters of the National Automobile Chamber of Commerce. Recent surveys made by the truck industry into the taxation of highway vehicles were cited in support of this conclusion.

Further increases in truck or bus taxation would have the inevitable result of curtailing operations of commercial motor vehicles and of depriving the public of the benefits which this comparatively new mode of transportation is capable of supplying, the statement declared.

State Taxes

Taxes levied by States in 1929 were reported as amounting to \$250,000,000, or 13 per cent of the \$929,479,000 which was collected from all motor vehicles during the year.

While the average tax on passenger cars was \$25.52 in 1929, the average imposed on trucks exceeded \$53, it was claimed.

In the common carrier field, the aggregate annual tax on each truck was eighteen times the average amount paid by passenger cars, and the average levy on buses was 22½ times that of automobiles.

Taxes on a single commercial vehicle exceeding \$1,000 annually were described as common in many States.

Railroad Seeks Lower Rates to Meet Competition of Motor Truck

DISTRIBUTION AND WAREHOUSING'S
Washington Bureau,
1163 National Press Building.

THE question as to just how far a railroad may go in reducing its rates to meet motor truck competition may be decided by the Interstate Commerce Commission in a suspension case (I. & S. Docket 3510) now before it.

The case involves rates on some 600 commodities which the Norfolk Southern Railroad is seeking to reduce. The proposed reductions would apply from Norfolk, Newport News and nearby places on the Norfolk Southern to points on the same railroad in North Carolina.

The rates sought by the railroad are the same as the boat-line rates now applicable from Norfolk to the North Carolina points. The competition, consequently, is not entirely by motor truck, but truck competition is one of the two important forms, the other being, of course, the boat lines.

In a brief just filed with the Commission by J. F. Dalton, traffic manager of the Norfolk Southern, the whole question of competition between the railroads and the unregulated truck and boat lines is thoroughly discussed from the standpoint of the railroads. The brief is unique in its approach to the subject and in the vigor and clarity of its language.

The Commission is called upon to enforce section 15-a of the Transportation Act so that the Norfolk Southern will receive the return on its investment to which it is entitled under that section. Strangely enough, this plea for enforcement urges the use of reduced rates rather than increases.

"The Norfolk Southern Railroad Company most respectfully demands that the Commission protect its property from the ravages and attacks of facilities unregulated, and operated solely in the interest of selfish gains of some individual," Mr. Dalton says in the brief.

"These uncontrolled and unregulated trucks and boats do not contribute or create any new business, but only operate to take away from the railroads their legitimate traffic, which has been developed at the expense of the public at large, who have their monies invested in common carrier properties. These uncontrolled and unregulated boats and trucks have but one motto, and that is to 'take all and give nothing.'"

According to the railroad the proceeding "involves the right of a common carrier, subject to Governmental regulation, to exercise initiative or managerial discretion to protect its property as devoted to public use, from the attacks and oppressions created by unregulated facilities."

The proposed reduced rates, the brief says, are dictated by competition set up by "these unregulated facilities." The claim is made that trucks and boats are "subsidized by the United States Government and States to the extent that money diverted from that paid by the public at

large is used to construct and maintain such inland waterways and highways wherever used by these unregulated facilities which, in the majority of instances, are operated for the selfish gain of either a single individual or a group of individuals. These unregulated facilities contribute nothing to the United States Government and very little to the States, certainly from a comparative standpoint to that paid by common carriers by railroad operated under Federal regulations."

Operation of trucks and boats in its territory has reached the point where a variety of traffic is being diverted from the Norfolk Southern Railroad with a consequent loss of revenue, the brief says.

"Under the method of assessing charges and practices of these trucks and boats, the situation also reached the point that on many commodities competition no longer existed with the railroad as these unregulated facilities domineer and control the movement of the traffic of the Norfolk Southern Railroad," according to the brief.

"Not feeling content to surrender its property, the railroad had no choice in the matter but to establish a schedule of charges that would bring to it a fair share of the traffic, or at least establish conditions of a competitive basis as nearly as practicable."

209-Page Foreword

Departing from the usual stereotyped legal phraseology generally employed in briefs before the Commission, Mr. Dalton wrote a foreword to his formidable document of 209 printed pages. It is in this foreword that the most interesting part of his argument appears. For this reason it will be gone into here at some length. It is fairly brimming with expressions of the railroad's point of view which will be of interest to truck operators, though they scarcely will line up on the side of Mr. Dalton.

At the beginning he declares that unregulated truck lines are not in the interest of commerce of the United States.

"Contrarily," he says, "such unregulated facilities of transportation are a menace and a burden to the country as a whole, since it is commonly accepted without the slightest doubt that railroads are indispensable to the communities to which they render the service of transportation."

He says the proceeding involves also the question to what extent may a railroad management use "managerial discretion" in the honest and efficient operation of the property entrusted to its care, "especially when the exercise of such discretion compels the establishment of a system of rates that is calculated to enhance its revenues and thus becomes an aid in realizing, as nearly as possible, a fair rate of return on the property devoted to public use, as subject to Governmental regulation."

"If rates be impelled by conditions beyond the carriers' control and espe-

cially brought about by destructive acts of unregulated facilities, such as boats and trucks," the brief continues, "and such rates do not transgress or violate any provisions of the laws governing regulated transportation companies, then the denial by the Commission to permit such rates to become effective is nothing short of an aid to the unregulated facilities of boats and trucks and at the expense of the common carrier railroads of the country operated by private capital, but under Governmental supervision.

"Such administration of the law can have but the inevitable result of bringing about chaos, disorder and a permanent interference with the principle embodied in the Transportation Act of 1920; i.e., of establishing rates that will yield a fair return upon the property devoted to public use, so as to bring about honest, efficient and economical management, an enlargement of the transportation facilities so as to provide the people of the United States with adequate transportation.

"This case is also unique in that, aside from the fundamental principles mentioned above, the broad question of Section 15-a of the Transportation Act is at issue and squarely involved to the extent the Commission will cooperate with the railroads in their effort to obtain a fair return on their investment.

"The Norfolk Southern Railroad, the principle respondent in this proceeding, believing in the conscientious and sincere efforts of the Commission to administer and to discharge faithfully its duties, as imposed upon it by law, believes the Commission is aware of the growing menace and jeopardy to the established railroads of the country, from the unregulated system of boats and trucks, and will not hesitate in this proceeding to forthwith discharge its duties by permitting these rates to become effective.

"Shall money paid to the Government continue to be diverted by the Government for the maintenance of highways and inland waterways for the benefit of some selfish motor or boat line operator, not subject to any regulation whatsoever, and the railroad denied the right to take appropriate action to protect its business?

"These unregulated boat and truck lines cannot hide behind the banner of public utilities or carriers, because they have no responsibility whatever to localities and the people thereat, as is the case with the railroad operated under Government regulations. The policy of these motor and boat line operators is to meet all, take all and no railroad carrier be permitted to meet their charges, or remain in the territory that they have and are wresting from the railroads.

"This proceeding also brings to the surface the question 'Shall the railroads, who are taxed to the throat-latch, as going business concerns, with millions of dollars investment, be called upon to face severe competition by motors running over highways and boats on inland waterways?' If so, how shall a Government-regulated railroad face such a condition?

"Shall the unregulated motor and boat lines be given the freedom of the land, to operate at will, to charge what they may and to take whenever they may the carriers' legitimately developed traffic, which traffic has been developed at years of effort and expense? To do so is tantamount to the taking of its property. No business concern of the country may be expected to remain idle under such a condition without availing itself of all its legal and moral rights to protect its investment.

"When a railroad undertakes to do nothing more or less than is permitted by the exercising of its legal and moral rights, and no violation of the law is thereby shown, then it is respectfully asserted that the Commission has no choice but to permit the carrier to exercise its initiative and establish such charges as are necessary to enable it to earn as nearly as practicable the statutory return upon its property, and this cannot be done except upon terms of equality of treatment.

"The magnitude of the operations of the unregulated motors and boat lines cannot be too strongly stressed or even over-estimated, as the competition set up by these unregulated motor trucks and boats has and is creating a great field of rivalry and competition with transportation companies, privately owned, but operated under Governmental regulations.

"This proceeding involves fundamental principles that are of grave concern, not only in the instant case, but also of general importance in the determination of the general question of how far shall the Interstate Commerce Commission permit railroads to exercise managerial discretion when no violation of the law is shown. Aside from the fact that in a proceeding before the Commission, where the charge or practice is a reasonable one and not shown to be unduly preferential, prejudicial or unduly discriminatory in any respect whatsoever, such a charge or regulation, being a lawful, reasonable and proper one, should not be suspended, or ordered cancelled by the Commission simply because the only vocal expression is in the form of a protest from an unregulated boat line that is neither a shipper, nor a consignee, nor a carrier that is even subject to the jurisdiction or regulation of any State or Governmental agency, and, accordingly, maintains a system of doing business according to its own choosing, namely:

- "1. A tariff that states certain amounts or charges for carrying freight;
 - "2. Makes private contracts for different shippers, providing for different charges;
 - "3. In the case of a big movement of tonnage at a particular offering, makes still a different charge, and
 - "4. Collects undercharges 'sometimes.'
- "There is no law governing or determining when such a boat line shall or shall not pay a claim. Such latitude as to the payment of a claim could be even carried to the point of a rebate for the purpose of controlling traffic. There is

no duty imposed by law on the Interstate Commerce Commission to either sanction, protect or to promote such loose methods of unregulated facilities of doing business. The American public is opposed to such methods that are so clearly contrary to sound business interests. It was conditions such as described that brought about in the eighties the passage of the Act providing for the regulation of (privately owned) railroads, and the amendatory Acts since that year, including the present Transportation Act of 1920.

"As to the indispensability of established railroads in the interest of the development of the commerce of the United States, and the safeguarding of the rights of its people and commerce, it is only again necessary to emphasize the fact that, while the railroads are regulated by the Government, nevertheless, in the time of national peril, or floods or droughts, it is not the unregulated boat lines operated on Government-subsidized inland waterways, or motor trucks, unregulated, operating on highways and paying practically nothing in the form of tax commensurate with the revenue received, that contribute to the relief of exigencies of these occasions, but it is the railroads.

"During the recent drought affecting a large area of the United States, who were the chief contributors in relieving this situation and giving up millions of dollars as a consequence thereof? The railroads. But the unregulated boats and trucks contributed nothing in the form of monetary relief, or reduced their charges, or made any contribution to relieve this cause whatsoever.

"In the time of national depressions, the railroads are the first industries of the country called upon to make additional outlay of capital expenditures to create or stimulate activities in the commercial and economic fields of the country; the unregulated motor trucks and boats contribute, again, nothing to these ends.

"The establishment of charges less than reasonable maximum rates cannot be said, in this instance, to create a new principle. The Commission is well informed that where competitive conditions, beyond the control of the carriers, exist, such conditions necessarily do not always permit of the application of reasonable maximum charges. This case is no exception to the general principle.

"The Norfolk Southern Railroad confidently believes that the Interstate Commerce Commission fully recognizes the seriousness of this condition, and will have no hesitancy in applying the law applicable thereto in this instance. The unregulated facilities; i.e., motor trucks operating on the highways and water craft on the inland waterways, are not to be accorded, even from a moral premise, the right to monopolize and dictate the competition that may exist, and especially where it is as in this case, fully shown of record that these unregulated facilities are merely transportation and handling traffic that has been developed by the railroad over a number

of years, and at considerable expense.

"These unregulated facilities are beyond the jurisdiction of any regulatory body, and the Norfolk Southern Railroad most respectfully insists upon the Interstate Commerce Commission's administration of the law to protect its business from being further depleted by the acts of these unregulated facilities."

—Stephens Rippey.

Recent Models

CHEVROLET MOTOR CAR CO., Detroit: A host of detailed improvements contributing to increased smoothness, easier servicing, longer life and improved appearance characterize Chevrolet's 1931 ½-ton delivery chassis and 1½-ton Utility truck. Prices on the new models also have been lowered and are now \$440 for pickup delivery; \$355, commercial chassis, and \$575, sedan delivery. Except for the rear end of the utility truck and the engine and transmission mountings, the same improvements apply to both models. The rear end of the truck model was changed recently and includes a heavier rear axle, pressed-steel wheels, internal 4-wheel brakes and optional provision of dual wheels. The wheelbase of the delivery model is now 109 inches, or 2 inches longer than last year.

Diamond T Motor Car Co., Chicago: A new offering is a 1-ton employing features of construction heretofore found only in vehicles of considerably greater size and carrying capacity. An outstanding feature is a chassis list price of \$695, far lower than ever before quoted on any Diamond T. The power plant is a 6-cylinder Hercules engine. The unit is equipped with Lockheed hydraulic brakes. The chassis is built in two wheelbases accommodating bodies to eleven feet in length, and a number of tire options is available to meet individual requirements for varying conditions of load and road.

International Harvester Co., Chicago: A new 1½-ton has increased capacity, longer wheelbase and heavier construction as compared with the original six-speed special introduced several years ago. It has six forward speeds and two reverse. The wheelbase is 136 inches, the overall length is 200 inches, and the total chassis weight is 2,980 pounds. The engine is of the 4-cylinder L-head type and mounted in a unit assembly with the engine are the single-plate clutch and transmission.

Pierce-Arrow Motor Car Co., Buffalo: A complete new line of flexible medium and heavy duty trucks to meet every transportation need includes five models with a range of 12,000, 18,000, 24,000 and 30,000-pound vehicles gross weight and a special 34,000-pound 6-wheeler for extra heavy duty. Prices range from \$2,950 to \$7,000.

The 2-ton (12,000 pounds), 3-ton (18,000 pounds) and 5-ton (24,000 pounds) are each offered in three wheelbases—

160, 180 and 200 inches for the 2-ton and 5-ton, and 150, 170 and 180 inches for the 3-ton. The 8-ton (34,000 pounds) is in two wheelbases—168 and 204 inches. Save for capacity, wheelbase, frame dimensions and double rear wheels, specifications of the 6-wheeler correspond to the specifications of the 5-ton chassis.

Engines throughout are 6-cylinder L-head type of Pierce-Arrow design and varying power. Engine and transmission are combined in one unit on the 2-ton and 3-ton. All other models, mounting is amidship. On 5-ton and 8-ton, driving and braking strains are absorbed by a heavy torque and pivoted at the axle. On the 2-ton and 3-ton the drive is taken through the radius rods and the braking through the springs. Transmission is of the 4-speed selective type; four speeds forward and one reverse.

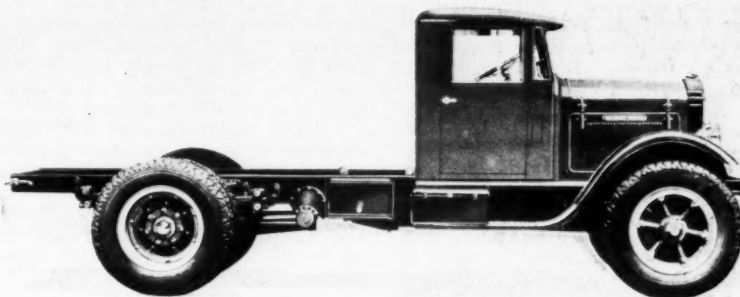
Powerful 4-speed brakes are designed to assure ample protection under all conditions. The 2-ton is equipped with mechanical self-energizing brakes supplemented with a vacuum booster for easy pedal action. The 3-ton, 5-ton and 8-ton are equipped with internal expanding air brakes operated from an air compressor of 2-cylinder Westinghouse design and air tank. Brakes are fully enclosed. An efficient emergency brake is mounted on the drive shaft at the rear of the transmission.

Cast wheels are equipped with heavy duty truck tires. Dual rears are standard throughout. Balloon tires are standard equipment on the 2-ton, 3-ton and 5-ton. For the 8-ton, dual solid tires are standard equipment.

An all-steel cab with seats adjustable to three positions is available on all chassis at additional cost. Bodies will be furnished to specifications.

Relay Motors Corp., Lima, Ohio: Model 300A, designed to carry heavy loads at high speed and pull one or more trailers, is powered by two separate 8-cylinder engines. Mounted in unit with each engine is a transmission providing five speeds forward and two reverse speeds; fifth speed is an over-drive, fourth speed being direct. Each of the four rear wheels of this 6-wheeler is free to oscillate independently within limits imposed by rubber stops. Steel wheels, 22 or 24-inch base, and dual balloon tires are standard for rear axles. Service brakes operate on all six wheels and are of Westinghouse type with American molded brake blocks. This new truck recently completed a run from Lima to Los Angeles, 2,605 miles, with a total gross load of approximately 36,000 pounds, in 94½ hours driving time—an average of about 28 miles an hour.

S. P. A. Truck Corp., South Bend, Ind.: A new Studebaker is a ½-ton delivery car of distinctive appearance and available with a choice of three bodies mounted on a 114-inch wheelbase chassis powered with a 6-cylinder engine, and all prices at \$895. The bodies are designated at boulevard delivery, de luxe delivery and canopy top express.



New Pierce-Arrow 5-ton chassis with cab

Standard Motor Truck Co., Detroit: Three Fisher-Standard models have been added—BX, a 1-ton; Special X, a 1½-ton, and 10AX, a 2-ton. The two light models are equipped with 4-cylinder Continental engines, and the 2-ton with a 6-cylinder Continental design. All models have 4-speed transmissions, full floating rear axles and 4-wheel brakes. On the 1-ton, Bendix mechanical brakes are employed, while the two heavier models are furnished with Lockheed hydraulics.

White Co., Cleveland: Six new 4-cylinder models and four 4-wheel-drive 6-wheelers are announced. The 4-cylinder units divide into two natural groups—a light group including Models 160, 161 and 162, all of 138-inch wheelbase, ranging from 1 to 2 tons capacity, and a slightly heavier group, including Models 210, 211 and 212 of 148-inch wheelbase, which range from 1½ to 2½ tons. The members of each group are similar to each other except for tire size, but the difference between groups is greater, varying in size and make of universal joints, size of rear axle and final reduction, amount of braking area, size of frame and capacity of springs. Variations in these models permit more exact fitting of chassis to load and operating requirements. For all six the powerplant is the same—a 4-cylinder White engine.

The 4-wheel-drive 6-wheelers come in three models—59, rated from 7½ to 10 tons; 63, rated at 3 tons; and 64, rated from 5 to 7½ tons. Model 64, however, is available with either a Timken Model SW 200 or SW 300 tamden axle. All three have the same powerplant—a White 6-cylinder engine.

G.M. Prices Lower

Price reductions of from \$50 to \$150 on three light-duty models and of \$600 on all types of the six-wheel heaviest duty model, coupled with increases in guaranteed capacity ratings on seven models, have been announced by O. L. Arnold, vice-president, directing sales of the General Motors Truck Co., Detroit. The new prices follow:

T-15, \$645, down \$50; T-17, \$675, down \$70; T-19, \$745, down \$150. Increases from 500 to 530 pounds in guaranteed straight rating capacity (total gross weight including pay load) on models formerly in the 1½-ton, 2-ton,

2½-ton, 3-ton, 3½ and 4-ton ranges have been announced.

Further I. C. C. Hearings in Truck Regulation Inquiry

THE Michigan Public Utilities Commission has been informed that most of the largest truck operators in Michigan can no longer continue to engage in common carrier truck operation because contract carriers and other carriers operating outside the pale of the Commission's authority take the cream of the business, declared R. H. Dunn of the Michigan Public Utilities Commission at the Detroit hearing, Dec. 11 and 12, of the Interstate Commission investigation of motor vehicle and railroad coordination. The St. Louis hearing was reported in the December issue of *Distribution and Warehousing* and the Kansas City, Dallas and Atlanta hearings in the January issue. The scheduled New Orleans hearing was not held for lack of testimony.

At the Detroit session Commissioner Dunn placed in the record results of the Michigan Commission's investigation of regulated trucks and buses, indicating that in 1929 buses under the Commission had an aggregate operating revenue of \$8,435,060 and aggregate operating expenses of \$7,607,187. Similar statistics of trucks under the Commission indicated an aggregate operating revenue of \$4,253,708 and aggregate operating expenses of \$4,320,689. Losses in common carrier truck operation under regulation of the Commission are attributable to the condition described by Mr. Dunn, in the previous paragraph.

E. J. Shover, Attorney for the Ohio Association of Commercial Haulers, testified that he did not believe that Federal regulation of motor freight transportation would be feasible until the States had made much more progress in regulating intrastate motor carriers. Most of the difficulty with State regulation came from contract carriers, particularly from those who acted as common carriers but posed as contract carriers, he alleged.

Commissioners Dunn and Samuel Odell of the Michigan Commission sat on the bench with I. C. C. Examiner Flynn at Detroit, and the only railroad

represented was the Pere-Marquette, whose freight traffic manager, R. P. Paterson, testified that the loss in the road's gross revenue in 1929, due to truck competition, was about \$3,500,000.

F. C. Schmidt, of the Ohio Association of Commercial Haulers, said, as did other truck operators present, that they had come to listen with the idea of giving testimony at this time if it seemed desirable from other testimony given, but up to this point they had heard nothing that suggested to them the desirability of giving any testimony.

Examiner Flynn, referring to the non-appearance of witnesses for respondents at this hearing, said the Commission was notified there would be at least seventeen present. He said there should be more testimony and constructive suggestions by experienced traffic officials of the respondents and others at these hearings to help toward the solution of the serious transportation problem for which this proceeding was being held.

In trucking, Commissioner Dunn told the Examiner, rates, rules, regulations and tariffs of the operators lacked uniformity. Until recently the truck operators followed the rail rates but had been forced to reduce rates on account of unlicensed competition. He said the Commission was uncertain as to whether it had the right to fix rates. Truck operators were agreed, he said, that profitable competition with railroads was doubtful beyond 150 miles, and certainly not beyond 200 miles. He questioned whether there could ever be effective control and regulation of motor trucks unless there was some interstate control.

At Boston

TRUCK and bus operators should be subject to the same regulation as the railroads, and existing transportation facilities should be one of the principal factors in determining whether a public convenience and necessity exists, according to John J. Pelley, president of the New York, New Haven & Hartford, testifying at the Boston hearing, Dec. 15 and 16, before Commissioners Brainerd and Examiners Flynn and Stephan.

Nathan W. Hawkes, vice-president of the Boston & Maine, which operates the Boston & Maine Transportation Co. as a trucking subsidiary, testified that the railroad felt that it was subjected to unfair competition and desired general truck regulation based on certificates of convenience and necessity and generally comparable to that to which the railroads were subject. Regulation should apply to "all public truckmen," he said.

Day Baker, of the Motor Truck Club of Massachusetts, charging that the Boston & Maine had deliberately cut trucking rates on certain routes below cost of operation in order to eliminate independent competition, enumerated twelve different kinds of taxes paid by motor truck operators in the Bay State, and quoted figures designed to disprove assertions that railroads made substantial contribution to the upkeep of highways. He declared that monopolistic control of transportation sought by rail

carriers would eventually result in raising the cost of transportation to shippers and the purchasing public and would tend to limit or destroy the flexibility which was, he said, the peculiar advantage of motor transportation.

Edward L. Hefron of the Boston Chamber of Commerce read a vote of that organization declaring against any regulation of the trucking business other than that which would conduce to highway safety and the proper protection of the shipping and general public against loss and damage. He stated, however, the opinion of the Chamber that the railroads should be permitted to go into motor transportation to any extent which they saw fit under no other restriction, so far as their strictly motor operations were concerned, than other motor carriers.

At New York

TESTIFYING before Examiner Flynn at the New York hearing, Dec. 18-20, William H. Chandler, manager of the traffic bureau of the Merchants' Association of New York and chairman of the Shippers' Conference of Greater New York, declared that the railroads themselves were largely responsible for the growth of motor truck operation.

"Railroad men, generally, seem to be in a panic on account of the present situation," Mr. Chandler said. "The only thought that seems to be running through their minds is that the only way they can save themselves from further inroads is by legislation intended to hamstring the trucks. They seem to be under the impression that, having had the monopoly of the transportation business for so many years, anything that now interferes with that monopoly, or any improved form of transportation which tends to take away from them the business they have heretofore enjoyed, is an infringement upon their divine rights."

After the war, Mr. Chandler said, when the railroads were unable to give satisfactory service they recommended that shippers use motor trucks, and many industrial traffic men now using trucks had told him that railroad service was so slow that it would be out of the question to resume use of rail transportation.

"The railroads," the witness continued, "have watched this freight slip away from them. Their eyes have been wide open while the process was going on but they took no steps to meet the competition. All they have done is to talk about taxation and to say that the motor trucks ought to be regulated. They have never presented any concrete outline of the regulatory legislation they want, nor have they ever really studied the taxation problem."

Mr. Chandler said it was "absurd" to expect the railroads to make as quick time as the motor trucks which have developed the store door pick-up and delivery with fewer handlings. He said he thought there was no possibility of the railroads recovering this class of comparatively short haul, less-than-car-

load traffic. He said he opposed regulation of motor truck transportation by the Interstate Commerce Commission, which was first the "protector" of the railroads. He explained that he meant no reflection on the integrity of the Commission, but felt that the Commission could scarcely maintain a fair regulation of motor transportation and at the same time protect the railroads.

Theodore D. Pratt, secretary of the Interstate Motor Carriers' Association, declared that "if the common carrier truck is regulated it will be the prey of the private or contract carrier truck which is free of regulatory control of Congress. Mr. Pratt continued:

"The private carrier truck can watch the development of the common carrier truck, select only that which he desires to carry, and take from the common carrier the profitable tonnage and leave it with the burden of that which is unprofitable. Hence, regulation would protect neither the rail nor common carrier truck."

"The railroads are complaining that anything that would jeopardize their success or efficiency should be avoided as a public menace. It is possible that a better means of transportation has been found. If so, it should be used, even if it jeopardizes the railroads' success. We do not claim to know what it is, but we think this attitude of mind, this peculiar psychology the rail executives are displaying, should be seriously considered in weighing railroad testimony."

"It is a fact, unfortunately for themselves, that the nearest approach we have to the feudal lord of past eras is the railroad president. For decades these presidents held the power of economic life and death over communities and businesses in a fashion very similar to the power of actual life and death held by the barons of older days; and it has given them a slant on public property and the property and success and happiness of people living in the territory which they serve. That may well be said to have laid the foundation for all the railroads' troubles."

D. R. Crotley, Newark, a past president of the New Jersey Merchandise Warehousemen's Association, and who appeared as a representative of that organization and of the New Jersey Industrial Traffic League said that each truck in New Jersey pays \$250 annually in taxes and \$500 in insurance. The gasoline tax of New Jersey last year, he said, was about \$125,000,000, which was used for highway maintenance and construction. His testimony was taken as an answer to the contention of railroad representatives that motor transportation was not paying its share of highway maintenance.

Edward D. Hillery, the Reading Railroad's vice-president in charge of traffic, summarizing the railroads' demands, asked:

1. That uniform legislation subjecting highway and water transportation companies to the jurisdiction of the Com-

mission and the State commissions be enacted.

2. That motor truck and bus and water transportation, should be regulated by Federal and State legislation providing that, when considering applications for the right to operate on highways and in water transportation, existing facilities by rail, highway and water should be considered.

3. That persons and corporations engaged in transportation on the highways and on water should be deemed common carriers.

4. That highway and water carriers should be compelled to publish tariffs and maintain "just and reasonable rates."

5. That taxation should be equalized among the railroads, highway, and water carriers and should be subject to equal "just and reasonable regulation."

Trucking in Pacific Southwest Discussed in Government Survey

DISTRIBUTION AND WAREHOUSING'S
Washington Bureau,
1163 National Press Building.

FOR the warehousemen of the Pacific Southwest there is much of interest in the increasing importance of the motor truck as a transportation factor, as shown in a recent survey made by the United States Department of Commerce. The inquiry was in line with the efforts of the Bureau of Foreign and Domestic Commerce to provide American business with information upon which it can base corrections of faulty marketing practices. These faulty practices in merchandising are said to waste about \$20,000,000,000 a year.

While the investigators do not appear to have studied the direct effects of increasing motor truck distribution on the warehousing industry, they developed facts which the intelligent warehouseman may relate to his own business.

The extent to which the motor truck transportation service has been developed in the Pacific Southwest is suggested by the fact that refrigerated truck service is maintained between San Francisco and a number of points in the Sacramento and San Joaquin Valleys.

In Arizona, California, New Mexico, Nevada and Utah, in 1929, a total of 250,706 motor trucks were in operation; these in addition to buses and passenger automobiles turned to commercial use. Many of the outlying districts are entirely dependent on motor vehicle transportation.

Over some areas as large as such eastern States as Maryland and Massachusetts, motor trucks are the sole means of commercial transportation. Yet the development of motor services is such that it may be said that no place is too remote to have some motor-driven vehicle operating for hire, ranging from the private car owned by a mountain resident to the most palatial bus on the truck-line highway. These with their variations, it is stated, give this area a rural transportation system in many

cases as well developed as any to be found in the United States.

The position of motor traffic in Arizona is cited as typical of the place of motor services in the transportation system of western United States. A great many communities find it necessary to depend on motor truck services in marketing their output from farms and mines and in securing their supplies from railway points as far as 100 miles distant.

In these sections the motor truck frequently serves not only as the vehicle of passenger and freight transportation, but also as distributor of the mails. Throughout the Pacific Southwest, motor routes operated by the postal service handle in addition to letter mail considerable quantities of parcel post, not only for the general public but for retail stores as well. In these areas which are dependent on motor transport it is by no means uncommon for the merchant to receive flour, sugar, canned goods, clothing and many other lines from wholesale centers by parcel post.

A review of the entire economic structure of the region is to be found in "The Commercial Survey of the Pacific Southwest," which now may be had through the Government Printing Office, Washington, D. C., for \$1.85.

This survey, quite incidentally, shows one of the difficulties encountered by those who would work out a program for the regulation of motor trucks. It discloses, for example, that in some areas only 20 per cent of the freight traffic by motor vehicles moves by common carrier trucks while 80 per cent of the freight is handled by contract haulage.

—Horace H. Herr.

Highway Trailer Buys Martin Co.

The Highway Trailer Co., Edgerton, Wis., has acquired the machinery, stocks, patent rights, name and good will of the Martin Trailer Co., Westfield, Mass., and the Martin rocking fifth wheel. Production will be continued under the same name, with sales hereafter only to truck and trailer manufacturers and not to fleet owners.

Transport Exhibit

Latest examples in transportation—motor trucks, buses, stages, commercial cars, tractors, etc.—will be on display at the Pacific Coast Transportation Exposition to be held at the Shrine Civic Auditorium in Los Angeles on March 15-28. Canada, Mexico and the United States and the States of Washington, Oregon, Arizona and California will participate.

When you ship goods to a fellow warehouseman—use the annual Warehouse Directory.

Organize to Fight Control by I.C.C.

AN organization which will be known as the Water Lines and Motor Vehicles Association of the United States has been forced in New York to fight legislation designed to place inland and coastwise water lines and motor vehicle lines under control of the Interstate Commerce Commission. Colonel Edward C. Carrington, president of the Hudson River Night Line, is president, and Howard Curtis, passenger agent of the line, is secretary.

According to Colonel Carrington, water and motor vehicle lines in their efforts to give expensive service would be hampered if subjected to I. C. C. control.

Operators of waterway and motor lines are being invited to join the new organization.

Would Tax Trucks More in Indiana

LEGISLATION to compel operators of freight trucks and buses to pay higher fees because of their "commercialization" of hard-surfaced roads will be introduced in the Indiana Legislature, according to announcement by John L. Niblack, a State Senator from Indianapolis. The program includes:

1. Placing further restrictions on the weight, height, width and length of buses and trucks.

2. Amending the 1925 public utilities Act to bring all buses and trucks used regularly for carrying passengers and freight under the jurisdiction of the Public Service Commission.

3. Giving the State board of tax commissioners original jurisdiction in making assessments of all bus and truck lines.

4. Substantial increase in the license fees for commercial buses and trucks that do a regular freight business.

"Not Fair" to Railroads

The old story of the suffering railroad is cited by Senator Niblack in explanation:

"It is not fair to the railroads to give their competitors in short haul passenger and freight business free rights of way maintained by the State and counties. The railroads are the biggest taxpayers in Indiana, and it is a short-sighted policy on the part of the State to permit unfair competition. Present license fees and the gasoline tax are not sufficient compensation to the State for the use of the roads by these common carriers.

"In addition, heavy trucks and buses destroy costly pavement and compel early resurfacing, and the exceptionally large motor vehicles are a menace to the traveling public."

Senator Niblack said that he believes motor vehicles may be used on their own rights of way and that he was considering introduction of a bill giving motor vehicle common carriers the right of eminent domain in acquiring rights of way to build their own roads.

WITH THE ASSOCIATIONS

HERE is presented in tabloid form the Association news that is of *general interest* to the industry as a whole. No effort is made to publish complete reports of all Association meetings; the dissemination of such information is logically the work of the officers and the committee chairmen. What is presented here is in effect a cross-section review of the major activities so that Association members may be kept advised as to what "the other fellow" elsewhere in the country is thinking and doing. When annual or semi-annual meetings are held, more extended reports will occasionally be published

Canadian Government Studying Complaint Filed by Warehousing

THE Canadian Department of Marine, at Ottawa, is studying the complaint filed by the Canadian Storage & Transferrers' Association against the use of wharf warehouses for storage purposes in competition with the established businesses of the association's members. The complaint was filed pursuant to action taken at the Toronto convention of the warehousemen's organization last June.

"It should be of interest to learn," according to a recent bulletin issued by E. A. Quigley, Vancouver, secretary of the association, "that the Department of Marine at Ottawa are at last making a move in the matter of this association's complaint having reference to the use of wharf warehouses for storage purposes, and of the question having reference to the practice of absorbing insurance. In dealing with the question of using wharf warehouses for storage purposes, the Department writes to say:

"The whole question is somewhat complicated. It is being studied in its various aspects. It is difficult to determine where the business of transportation ends and storage begins. Obviously the two questions are closely associated, and it appears that freight will not move by water transport except in considerable consignments, and considerable consignments cannot be handled without reasonable storage facilities. This applies particularly to the transportation of sugar. Again, this Department is in receipt from time to time, and from various localities, of requests from cooperative associations and others for storage accommodation during the winter months for fertilizer to be brought in at the close of navigation and distributed to farmers during the winter. A similar situation arises in connection with salt for fishermen.

"The construction of all Government wharves is paid for out of the particular Parliamentary appropriation voted for that purpose, and all these appropriations for the construction of wharves are made by Parliament for the general advantage of Canada, and it is perhaps conceivable that the particular advantage of a storage company might be at variance with the general advantage of Canada."

"The Montreal warehousemen inter-

viewed the Harbour Commissioners of Montreal some time ago on the question of the practice of absorbing insurance and although they were then promised some definite action, nothing really has been done and conditions in Montreal have not improved. They had hoped to have been able to get the matter straightened out, without having to take it up locally, but they have now come to the conclusion that the only procedure is to get the matter before the Minister and they are now working on preparing documentation to present the matter to the Minister at Ottawa. As soon as they are ready to present this, it is more than likely that arrangement will be made to have western delegates attend at Ottawa with the eastern warehousemen so that, by being present at the time, the Minister cannot possibly overlook the joint action of western and eastern warehouses on these two important questions."

Warehousemen Against Future Sales of Goods Not Already in Store

FUTURE trading in dairy products, including butter and eggs, should be eliminated unless the products are actually in a warehouse, the Port of New York chapter of the cold storage division of the American Warehousemen's Association declares in a resolution made public on Jan. 1.

The stability of the market in dairy products is affected by futures trading, the resolution declared, and this, it was said, "may unduly affect or impair the value of the commodities on which loads are made by the warehouses."

Admitting that the warehouse industry is in large part to blame for an overextension of credit, T. A. Adams, chairman of the chapter, issued a statement warning that the situation would result in a total loss for 1930 of more than \$1,000,000,000. He said:

"Overextension of credit will cause a loss during 1930 of over \$100,000,000. As an organizer of the New York Credit Men's Association and one of the incorporators of the National Credit Men's Association, I regret to acknowledge that our industry is directly to blame for a large part of the overextension of credit, in the form of advances in food distribution."

Mr. Adams declared the cold storage industry agreed with Alexander Legge, chairman of the Federal Farm Board, who recently took the position that regulation of trading, especially in futures, in certain commodity industries had been inadequate and unsatisfactory. Although Mr. Legge's remarks were directed particularly to the wheat and cotton markets, Mr. Adams said the same criticism applied with equal force to the markets for dairy products. He held that "all trading should be predicated on stores of food, ready and waiting for delivery for human consumption in accordance with the terms of the sale."

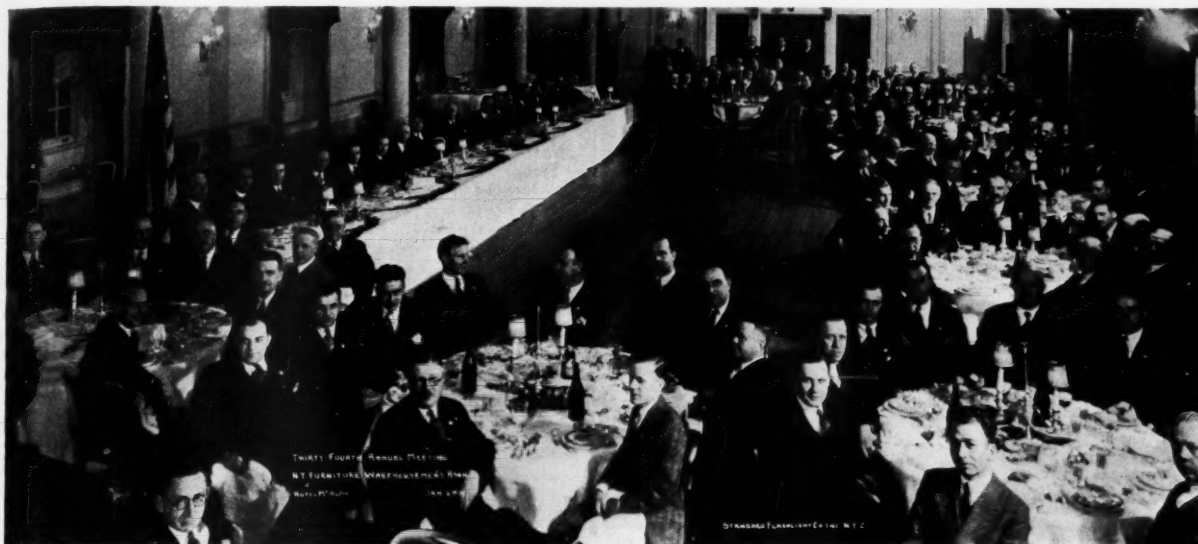
New York Warehousing Fights Municipal and Railroad Competition

THE Warehousemen's Association of the Port of New York at its December meeting adopted a resolution declaring "its steadfast opposition to the use of any properties that are now or hereafter may be owned by any form of our Government, Federal, State, county or city, and operated by any bureau, department, board or authority thereof, in such manner or upon such basis as to create an unfair, unequal or unlawful competition with the warehouse industry."

This memorial was prompted by an announcement that the city of New York would lease thirteen Staten Island piers, together with upland in front of the piers, at rentals so low that the operators of the piers would be able to offer leases and rentals to steamship companies far below those needed by private waterfront owners.

"It is," said a letter which the association sent to the Port of New York Authority, "a case of Government interference with prices, supply and demand, the results of which are easy to forecast."

"As to the rental of upland, the object is undoubtedly to provide cheap land on which to erect warehouse buildings for special commodities in order to give a preference to the handling of same. Such an arrangement would hurt the warehouse industry of the entire port and give a very great preference to the company operating the Staten Island piers."



Banquet following thirty-fourth annual meeting of the New York Furniture Warehousemen's Association at Hotel McAlpin in New York on January 5

The committee on railroad practices reported that the railroads were extending the rate now applying to merchandise in storage in transit to apply to merchandise in storage after expiration of the in-transit privilege.

Protest against this tariff change had been made, the committee stated, but the protest had been overruled on the grounds that the warehousemen's association was not a shipper and that the points raised by the warehouse group had been fully covered in the rehearing of I. C. C. Docket 12681, scheduled for early in 1931.

Coughlin Elected 1931 President of New York F. W. A.

THE New York Furniture Warehousemen's Association held its thirty-fourth annual meeting on Jan. 5 at the Hotel McAlpin in New York City and elected officers and directors as follows:

President, J. H. Coughlin, manager Lee Brothers, Inc.

Vice-president, Louis Schramm, Jr., secretary Chelsea Fireproof Storage Warehouses, Inc.

Secretary, William T. Bostwick, president Thomas J. Stewart Co.

Treasurer, William R. Wood, secretary Liberty Storage & Warehouse Co.

Director for two years, George Kindermann, president Julius Kindermann & Sons, Inc. Directors for three years, Thomas F. Murray, president Day & Meyer, Murray & Young, Inc.; John G. Neeser, president Manhattan Storage & Warehouse Co., and John D. White, president Chas. D. Strang, Inc. (Brooklyn).

It transpired that under the new set-up under which the Furniture Warehousemen's Association of Brooklyn & Long Island becomes a unit of the New York F. W. A., Mr. White, who is presi-

J. H. Coughlin



Elected 1931 president of New York Furniture Warehousemen's Association

dent of the Brooklyn association, automatically becomes a member of the board of the New York association. This situation left a vacancy on the board, and, on nomination by Charles S. Morris, Charles D. Morgan, Jr., was elected a director for three years.

In his report as retiring president Mr. Murray reviewed the association's 1930 activity, including the blocking of adverse legislation at Albany. "The sting of the 1930 depression might have been avoided," he declared, "if we had sincerely cooperated in an attempt to obtain proper and compensating rates for our various services, thereby creating a surplus which, in such times as we are now going through, would not force us to re-

sort to competitive measures which are very dangerous."

Mr. Bostwick's report as secretary showed a membership of 85 companies, as compared with 89 a year ago, the decrease being due in part to mergers. The average attendance at 1930 meetings was 73, Mr. Bostwick said.

As retiring chairman of the board, Mr. Morgan said conditions were healthy within the industry; the cubic foot occupancy was about the same in 1930 as in 1929, he pointed out, and rates were higher.

Ernest H. Milligan, chairman of the sales expansion committee, alluding to the household goods survey which the committee made last year, said that apparently the association was not yet closely enough knit to enter a campaign of advertising to build potential business, but that it was the committee's opinion "that, as time goes on, advertising in various ways will be taken up by warehouses because new buildings with all modern facilities will gradually displace the older ones and make new sources of revenue imperative." This new business, he declared, would "reduce the percentage of overhead of our present activities and provide the hope for a better return on our investment."

Fred G. Kelley, Inc., Jackson Heights, N. Y., was elected to membership.

—K. B. S.

Holt Talks About Lift Van Service in European Cities

HERBERT B. HOLT, San Francisco, president of the California Van & Storage Association, closely following his return from a European tour, told of the warehousing and moving situation there, at the December meeting of the association, northern division, held at San Jose.

Storage and moving firms ship their lift vans all over Europe, Mr. Holt said. One lift van just fills a freight car. A saving of time thus is effected, as it is not necessary to wait to assemble two or three lift vans to fill a car. A weekly association bulletin tells where each van is resting and in this way an interchange of business is arranged.

The storage and moving business in Holland, he said, is thoroughly modern and progressive and the equipment is equal to that in the United States. Most of the people in Amsterdam, Mr. Holt reported, live in modern flats built under the direction of the Government. Each flat has an outside stairway, too narrow for a passageway for household goods, so that when these are to be stored, or removed for any other cause, they are lowered from or hoisted to the upper floor by means of block and tackle.

Harvey B. Lyon, the division's secretary, announced the annual convention of the California association would be held at Santa Cruz about Feb. 22. It is expected that the raising of storage rates in fireproof buildings will be discussed.

Because of keen competition in the hauling of crated household goods in California and south of it, outsiders, it was declared, often taking jobs at less than cost, members were urged to junk obsolete van bodies, rather than to sell them to persons who would create unfair competition.

—Clarence Ebey.

Petry Is Elected President of the New Jersey F.W.A.

AT the annual meeting of the New Jersey Furniture Warehousemen's Association, held at Daniel Ruder's Sign of the Lobster Restaurant in Newark on Jan. 7, officers and directors for 1931 were elected as follows:

President, Frederick Petry, Jr., president Petry Express & Storage Co., Trenton.

First vice-president, James E. Mulligan, secretary Knickerbocker Storage Warehouse Co., Newark.

Second vice-president, Richard Coyne, Jr., owner Richard Coyne Warehouses, East Orange.

Third vice-president, Nathan L. Goodman, secretary Goodman Warehouse Corp., Jersey City and Bayonne.

Secretary, Frank J. Summers, Model Storage Warehouses, Newark.

Treasurer, Griswold B. Holman, secretary Geo. B. Holman & Co., Inc., Ruthersford, Hackensack and Westwood.

Directors, three years each, Edward E. Leach, operating executive E. E. Leach, Inc., Montclair, and Thomas A. McGrath, treasurer Roseville Storage Co., Newark.

The nominating committee chosen for 1932 comprises Daniel Ruder, Sr., president Iron Bound Storage Co., Newark; Walter W. Hoffman, proprietor Hoffman Express & Storage Warehouse, Ridgewood, and John O'Connor, Jr., manager Orange Storage Warehouse, East Orange.

Van Drivers Take Notice

NEW YORK racketeers who walk off with unguarded vehicles stole a \$5,300 motor truck of the Tiffany Fireproof Warehouses, Inc., on Dec. 30. On the van, which had been parked in West 86th Street, were \$634 worth of equipment and a barrel of silver, the latter belonging to a customer.

The truck was driven away while the driver was collecting empty barrels at an apartment house, and detectives were never able to find a trace of it.

Gedert Is Again Head of Detroit Van Association

THE Detroit Van Owners' Association at a meeting on Jan. 26 installed its officers elected for 1931, as follows:

President, J. J. Gedert; vice-president, H. H. Connor secretary-treasurer, Roy R. Leonard, manager Leonard Brothers Storage Co. Board of directors, Arthur A. Leonard, president Leonard-Detroit Storage Co., and J. Duncan, Joseph Dunn and Frank Abram.

The Northwest Movers' Association, an affiliate, elected H. A. Connor president, H. R. Leonard vice-president, W. B. Woodhull secretary-treasurer, and, as directors, Bert Bean, Frank Abram, W. H. Moore and A. W. Dettman.

The East Side Movers' Association, another affiliate, elected Clement Schmitz president, Robert Palmer vice-president, Edward Mertz secretary-treasurer, and, as directors, James McGrath, Frank Cass, Edward DeSmet and William Hacker.

—Philip N. O'Hara.

Pennsylvanians' Annual Will Be Held on Feb. 10

THE annual meeting of the Pennsylvania Furniture Warehousemen's Association will be held at the Lorraine Hotel in Philadelphia on Feb. 10 and will be followed by a banquet and entertainment arranged by the Philadelphia chapter.

The nominating committee which will present the 1931 slate of officers and directors comprises Charles Fitzpatrick, Philadelphia, as general chairman, and Frederick K. Geiger, Philadelphia; David Murdoch and Charles Blanck, Pittsburgh; C. N. Neff, Lancaster; R. C. Lay, Oil City, and S. E. Karns, Hazleton.

The slate to be presented at the February meeting is headed by the present president, Walter E. Sweeting, Philadelphia. The vice-presidents nominated are E. W. Irwin, Erie; Buell G. Miller, Philadelphia; and James F. Keenan,

Pittsburgh, 1929 and 1930 president of the National Furniture Warehousemen's Association. J. Wallace Fager and Frederick L. Harner, both of Philadelphia, have been renominated as secretary and treasurer, respectively. Nominated for directors are E. E. Zeiter, Harrisburg; Truman H. Barker, Wilkes-Barre; L. G. Howard, Uniontown; Harvey J. Lutz and J. J. Hartey, Philadelphia; and D. V. Murdoch, Pittsburgh. Arbitration committee members nominated are F. F. Lazarus, Bethlehem; James E. Kromer, Wayne; T. N. Hostetter, Lancaster; Samuel S. Johnston and J. L. Gillies, Philadelphia; and D. F. Chanahan, Pittsburgh.

Walter E. Sweeting, Philadelphia, president, recently announced standing committees. The chairmen are L. D. Howard, Uniontown, insurance; Buell G. Miller, Philadelphia, laws and legislation; Hugh G. Walsh, Pittsburgh, membership; John J. Hartley, Philadelphia, traffic; Joseph P. Carson, Philadelphia, meetings; Charles J. Fitzpatrick, Philadelphia, uniform methods; R. F. Post, Scranton, labor; and F. A. Headley, Chester, cost and accounting.

B. G. Miller Heads the Philadelphia Chapter of Pennsylvania F.W.A.

THE Philadelphia Chapter of the Pennsylvania Furniture Warehousemen's Association at its annual meeting, on Jan. 13, elected officers for 1931 as follows:

President, Buell G. Miller, president North Broad Storage Co.

Vice-president, Walter E. Sweeting, president Atlas Storage Warehouse Co. Secretary, J. Wallace Fager, Miller North Broad Storage Co.

Treasurer, F. L. Harner, treasurer Fidelity-20th Century Storage Warehouse Co., Inc.

Directors for two years, Harvey J. Lutz, Walter Whiteside and Milton Harrison.

Director for one year, Charles Fitzpatrick.

Arbitration committee, H. N. Harrison, B. G. Miller, F. K. Geiger, C. Fitzpatrick and George Emig.

Chapter representatives for State board of directors, Harvey J. Lutz and John J. Hartey.

Members of State arbitration committee, Samuel S. Johnston and J. L. Gillies.

New Ford Bodies

Addition of twenty-three new body types to the Ford line of trucks and light delivery cars was announced on Jan. 6, when they were shown for the first time in New York. Several are understood to be already in production and others will be in February and March.

These bring the number of commercial car types in the Ford line to more than fifty, available for mounting on chassis of 131½ and 157-inch wheelbases.

HOW'S BUSINESS?

GOING TO BE THIS MONTH

CHARTED BY UNITED BUSINESS PUBLISHERS, Inc.

THIRTY-FOUR ECONOMIC EXPERTS—EDITORS OF BUSINESS PAPERS PUBLISHED BY THE *United Business Publishers, Inc.*—HERE PRESENT A COMBINED OPINION ABOUT THE COURSE OF BUSINESS DURING THE MONTH OF FEBRUARY. GOVERNMENT AND OTHER RECORDS PROVIDE YOU WITH HISTORY OF RECENT MONTHS. THIS BOARD OF EXPERTS DEALS ONLY WITH THE FUTURE. ITS OPINIONS ARE BASED ON CLOSE CONTACT WITH THE MORE THAN 400,000 SUBSCRIBERS REACHED BY THEIR PUBLICATIONS IN FAR-FLUNG FIELDS OF RETAILING AND INDUSTRY.

THERE is no self starter attached to consumer demand. "Buy Now" must be preceded by a spirit of "Sell More" on the part of manufacturers and merchants, alike.

Many firms are girding themselves for a year of extraordinary sales promotion effort, realizing that their selling program will be effective in proportion to being aggressive and carefully planned. While the interdependence of business has been forcefully brought home to many lines of endeavor, those concerns whose record will be most favorable at the end of 1931 are not complacently waiting for someone else to start and lead the procession.

They are giving their employees as-

surance that their jobs and earnings are secure, and are capitalizing this sense of security by setting quotas of business and then demanding initiative and cooperation all down the line.

A definite trend toward optimism in the press has done much to relieve the defeatist attitude that was maintained in many minds during the last quarter of 1930. Psychologically, a turn was anticipated in many minds with the stepover in to the new year, and there is every reason to believe that, with the majority satisfied that the bottom has been reached and passed, those concerns aggressively wooing Business will find her a much less adamant lady more inclined to give consideration and approval to determined advances.

THE COURSE OF BUSINESS FORECAST FOR FEBRUARY

BUSINESS	SALES	RETAIL STOCKS	COLLECTIONS	COMMENTS
AUTOMOTIVE	Passenger cars 15% to 20% better and trucks 6% better in Feb., as compared with Jan. '31 and 36% and 15% less respectively than in Feb. '30.	Passenger cars slightly higher and trucks about the same as Jan. '31, and both lower than Feb. '30.	Same as Jan. '31, and somewhat better than Feb. '30, in both lines.	Since 1930 sales were not strongly affected until after the first quarter; first quarter car sales in '31 are not expected to equal or better last year's performance.
DEPARTMENT STORES	Feb. about same as Jan., but 10% less than Feb. '30.	Stocks 2% less than Jan., and 12% less than Feb. '30.	Collections on a par with Jan. '31, and Feb. '30.	Sales Promotion (which does not mean "Sales" in the usual sense) is the present day problem with the retailers.
HARDWARE	Approximately 10% better than Jan. '31, and about the same as Feb. '30.	About 10% larger than Jan. '31, and about 10% under Feb. '30.	Slightly better than Jan. '31, but somewhat slower than Feb. '30.	Volume of orders for Spring delivery indicates optimism of the trade.
INSURANCE	Life and most other lines will show slight decrease in Feb., as compared with Jan. Life slightly less and other lines the same as Feb. '30.	.....	Continuance of recent improvement indicated. Outstanding balances lower and collections easier than Feb. '30.	A pronounced spirit of optimism pervades the majority of insurance offices.
JEWELRY	Expectations vary in different sections. On the whole, slightly less than Jan. '31, and less in amount but greater in number than Feb. '30.	Generally less than Jan. '31, and lower than Feb. '30.	Lower among credit jewelers and the same among cash jewelers as Jan. '31, and as compared with Feb. '30.	Lowered buying of high priced items at Christmas has left many retailers with unbalanced stocks.
MACHINERY METAL PRODUCTS METAL	Steel production about 50% to 60% of capacity in Feb., as compared with 40% to 50% in Jan.	.....	.....	Spring recovery in steel business depends to large extent on conditions in building construction, railroads, and automobiles.
PLUMBING AND HEATING	Slight improvement over Jan. '31, but below Feb. '30.	About the same as Jan. '31, and considerably lower than Feb. '30.	Slow, but better than Jan. '31 and somewhat better than Feb. '30.	This industry will not come into its own until residential building hits its stride.
SHOES	Retail liquidation continues. Compared with Feb. '30, more units, but less dollars.	Stock reduction continues. National average, compared to Feb. '30, 20% less.	Collections steady, but with a disposition to delay.	While buying is cautious the majority of stores will be in the market in Feb. for spot deliveries.

Mothproofing Solutions Discussed in Report of Government Entomologist

INVESTIGATIONS of stored-product insects have been proceeding at Washington during the past year under the direction of Dr. E. A. Back, Government entomologist, according to the annual report of C. L. Marlatt, Chief of the Bureau to Entomology, to Secretary of Agriculture Hyde, the work being along the line of the development of new fumigants and adapting them to commercial practice.

The outstanding feature, the report says, was the development of a new method of fumigating wheat in large terminal elevators.

There were experiments with ethylene oxide, alone and in combination with carbon dioxide, particularly in relation to insect control in such food commodities as nut meats, candies, dried beans, rice, breakfast cereals, flour, cartoned goods, and in such manufactured articles as upholstered furniture.

"The work on household pests has been of a very general nature during the past year," the report says. "Numerous experiments have been conducted to determine as far as possible from laboratory work the value of a number of so-called moth-proofing solutions. While no solution at present available to the public has proved itself capable of permanently or completely moth-proofing any fabric, laboratory results indicate that the better cinchona alkaloid solutions and those containing fluorine compounds are capable of imparting a moth resistance that is of practical value. To be of value they must be applied in such a manner that the fabric is thoroughly wet by them.

"The outstanding feature of the work with moth-proofing solutions is the co-operative work conducted with the Bureau of Chemistry and Soils in developing a solution that can be offered the public under a public-service patent. This has led to tests of different strengths of a rotenone dissolved in acetone which gave such gratifying results that a public-service patent was applied for in February, 1930.

"Rotenone is one of the insecticidal constituents of Derris root, cubé root, and other tropical fish-poisoning plants. It is a white crystalline material of the formula $C_{23}H_{33}O_6$, with a melting point of 163° F. It is quite insoluble in water, is very slightly soluble in petroleum oils, slightly soluble in alcohol and ether, and readily soluble in chloroform, ethylene dichloride, and other chlorinated hydrocarbons.

"Cloths treated with solutions containing 1 per cent and 2 per cent of rotenone dissolved in acetone were thoroughly protected against the ravages of the webbing clothes moth (*Tineola biselliella* Hum.), the furniture carpet beetle (*Anthrenus vorax* Casey), and the black carpet beetle (*Attagenus piceus* Oliv.), when they were confined in Petri dishes both with and without untreated cloths. Even 0.05 per cent solutions of rotenone

in acetone gave excellent protection. It is hoped that this solution can be developed sufficiently to become available to the householder."

Crotsley Foresees Better Warehouse Business in East

DISTRIBUTION AND WAREHOUSING'S
Washington Bureau,
1163 National Press Building.

GOOD prospects and increased business for the warehouse industry in New Jersey, Delaware, Maryland, New York and eastern Pennsylvania were forecast by a committee report presented to the Atlantic States Shippers Advisory Board, meeting in Washington on Dec. 19.

"From present indications it looks as if there would be a slight increase in warehousing in this territory during the next quarter, possibly an increase of around 4 per cent," said the report, presented by the committee chairman, D. R. Crotsley, vice-president of the Lehigh Warehouse & Transportation Co., Inc., Newark, N. J.

The committee stated it had received no complaints relating to terminal service or unloading of cars. It noted that there were a number of railroad-owned warehouses in this territory and that no reports were received from them. It suggested that the railroads be asked for reports as to conditions affecting their warehouses.

General reports to the board indicated a decrease of 1.1 per cent in carloadings of all commodities during the first three months of 1931, as compared with the corresponding period of 1930.

—Fred W. Perkins.

Daniel Resigns from Civic Body

AFTER serving seven years as president of the Central Industrial District Association of Kansas City, C. C. Daniel, president of the Central Storage Co. of that city, resigned recently.

On the occasion of his retirement the association presented Mr. Daniel with a wrist watch in appreciation of his leadership.

New Business for Warehouses: Stor- ing Bottled Gas

(Concluded from page 33)

Hi-Heat Gas Co., New York, N. Y.
Super-Fuel Co., Tampa.
Universal Bottled Gas Co., Rochester, N. Y.
Illinois Bottled Gas Co., 35 W. Jackson Boulevard, Chicago.
Delco-Light Co., Dayton.
Vapyre Corporation, Pleasantville, N. Y.

1931 America Forward March

Four Men Suffocated in Parked Moving Van of Philadelphia Firm

FOUR men were found suffocated in a moving van of the Melville Storage Co., Philadelphia, a half-block from police headquarters at Jamaica, N. Y., on Christmas night.

The truck, manned by three Negroes, left Philadelphia on Dec. 21 with a load of Christmas trees and plants for delivery at East Patchogue, N. Y. The crew—Elgin Jackson, 32 years old; Harvey Thompson, 42, and Waymont Woodward, 32—had instructions to unload at East Patchogue and proceed to Flushing, N. Y.

Two days later they had failed to return to Philadelphia and officers of the Melville company feared they had met with foul play. Checking up on the movements, they found that the truck had reached East Patchogue safely, but that a furniture load in Flushing was still uncalled for. The storage company telephoned the Queens Borough police and two patrolmen were assigned to look for the van.

Half a block away, on Christmas night, they saw a huge truck parked. Inquiry disclosed that the crew had not been seen since bringing the van there. The patrolmen opened the door and found four bodies inside.

Two burned-out alcohol lamps stood in the center of the truck. The police believe the fourth man was a hitch-hiker picked up by the crew, and that the four, to save hotel expense, decided to sleep in the van; that they lit the lamps either to prepare some food or warm themselves, and that, the truck being airtight, the oxygen inside was soon exhausted and the men were suffocated.

Alvin E. Dodd Joins Kroger

ALVIN E. DODD, widely known to warehousing by reason of his former position as chairman of the Domestic Distribution Department of the Chamber of Commerce of the United States, became assistant to Albert H. Morrill, president of the Kroger Grocery & Baking Co., on Jan. 1.

As the first director of the Retail Research Association, one of the initial department store groups, Mr. Dodd began what is recognized as one of the first scientific attempts to study retail management methods. Two years ago he went to Chicago as assistant to the head of the Sears, Roebuck organization, being in charge of the retail store operations of that firm, from which he resigned to go with the Kroger interests.

Kay Firm to Build

The Kay Moving Service, Inc., New York, has filed plans for a \$100,000 eight-story household goods storage warehouse, 52 by 100 feet, at 2468-2470 Amsterdam Avenue. George S. Kingsley is the architect.

Irving T. Bush Says America Will Lead World to Recovery

BUSINESS conditions all over the world will show a decided improvement by the end of the new year, with the United States leading the way to recovery, according to Irving T. Bush, who, president of the Bush Terminal Co., New York, is internationally recognized as an economic expert and an authority on shipping and foreign trade.

Analyzing present business conditions and the prospects for 1931, at the request of a group of Boston business men, Mr. Bush said that "periods of depression seldom last longer than two or two and a half years" and that "fundamental business conditions are about at bed-rock." He continued:

"I believe we are passing through the final house-cleaning after our recent speculative debauch. At this stage I still expect a final spasm in the security market, followed by a period of stagnation. Periods of depression seldom last longer than two or two and a half years. One-half of this period is already behind.

"World trade is out of joint in other countries. In spite of this, I expect slowly improving conditions in 1931 and a decided improvement by the end of the new year. When the slate has been cleaned and improvement comes, I believe it will include European nations, but will be apparent in the United States first."

Pointing out that too rapid development must not be expected, "for business has been very sick," Mr. Bush said the first six months of 1931 would compare with a similar period in 1930, when conditions never reached an acute stage.

"This will result in unfavorable comparative statements, which will appear to be more discouraging than they really are, as compared with the last half of 1930," he said.

"The underlying wealth of the United States is still with us, and, best of all, the underlying character. It is character that determines the success of a man or a nation. It is a time for courage and the exercise of common sense. I have no faith in legislative cure-alls. We should learn to spend sanely what we have earned and not to mortgage the future. A little hard luck never hurts any one, for it builds character.

"We have been drunk with false prosperity. When we get over our headache, there will be enough real fundamentals to satisfy any one except those who expect something for nothing. Our best success is built on hard work and educated intelligence. The future holds even greater opportunities. These tested principles were tried again, and we stopped working for the easy road, which always ends in a skid."

Conditions Healthy

THE present business situation is "a healthy cleaning up," comments William T. Bostwick, president of the Thomas J. Stewart Co., New York, in a

letter to *Distribution and Warehousing*. Mr. Bostwick, who is secretary of both the New York State Warehousemen's Association and the New York Furniture Warehousemen's Association, and eastern vice-president of the National Furniture Warehousemen's Association, explains:

"In reading various articles concerning the present conditions, I fail to find anyone who refers to the present condition of affairs as a healthy cleaning up of a bad situation. Whether the writers are afraid to say this or whether they don't believe that it is true, I don't know. However, I believe that the period that this country is going through now is very healthy. It is teaching those who thought they could make money easily that money is a difficult and hard thing to obtain and that gambling is not the way to obtain it. It is also compelling the business man to more intensive thinking in connection with increased efficiency than has been necessary for some time."

New York Will Protect Moving Firm Employees

SIXTY out of two hundred companies engaged in the business of moving furniture in New York City were found to be without workmen's compensation insurance, according to a special investigation conducted recently by Frances Perkins, State Industrial Commissioner.

Fifty-nine of the delinquent employers immediately secured the necessary insurance protection for employees and one was summoned before a city magistrate, it was stated.

Under the new enforcement plan Commissioner Perkins has announced that investigators of the Labor Department will make a special canvass of employers in the more hazardous occupational groups. There are at least 200 more moving concerns to be canvassed in the present campaign, according to Miss Perkins.

In all conspicuous cases of omission to secure compensation insurance, she said, prosecutions will be undertaken whether or not there are pending compensation claims for injuries.

C. N. Jenkins Heads Long Island Company

THE Long Island Storage Warehouses, Inc., Brooklyn, at a meeting on Dec. 30, elected officers as follows:

President, Clifford N. Jenkins; first vice-president, Alexander N. Fleming; second vice-president, Harry W. Wastie; treasurer, Edward T. Jenkins; secretary, John H. Kirby.

Mr. Wastie, who is general manager, joined the Long Island recently after the Brooklyn Warehouse & Storage Co., of which he was manager, discontinued business. He was the 1930 president of the Furniture Warehousemen's Association of Brooklyn and Long Island.

The Unit Carload —Proper Packing Leads to Economy

(Concluded from page 22)

joint. The stays, too, are usable for another trip.

Economy

ANY form of unit loading costs far less than to brace the load with wood. Costs for blocking with wood vary widely with the quantity of lumber used and the species required, but probably \$5 to \$30 a car represents the low and the high range. The time required runs from one hour to five or six. As compared with these figures, any ordinary carload of goods can be blocked with steel bands for \$2-\$3. It is a one-man job, quickly learned by any laborer. The time required is somewhere in the neighborhood of half an hour.

Wood blocking, moreover, adds to the freight weight anywhere from 300 to 1,500 pounds dunnage. Freight on this dead weight is levied, not on rough lumber which really it is, but on the rate which applies to the goods themselves.

For example, it is reported that a maker of sheet steel in the Pittsburgh district was shipping an average of ten carloads a day. Each carried one thousand pounds of dunnage. The freight rate was 29c. per 100 lb., or, each day, a total of \$29. But, using steel bands for unit carloading, the weight for each of the ten cars is today somewhat less than 100 pounds—one-tenth what the dunnage had been weighing. This reduced the freight item alone by 90 per cent, or \$26.10 a day.

Another shipper, who makes white lead, required heavy bridge timbers to protect the steel drums from damage in carloads. This bracing weighed 1,600 pounds to the car; whereas, by adopting steel bands, this excess weight became only 50 pounds.

Benefits

FOR the unit carloading, therefore, these benefits are to be had:

1. Eliminates damage to the goods.
2. Reduces the costs of bracing and cleating.
3. Decreases the time necessary to load a car.
4. Lowers freight bills.
5. Increases goodwill of customers.

Naturally, therefore, the railroads' freight claim agents are for unit carloading. Upwards of 140,000 carloads were "unit loaded" last year, by some 600 shippers. The number is sure to grow, as alert managements learn of the new method and as they grasp the one principle of so loading a car as to withstand the shocks of transportation.

Cottor Route Transferred

The Cottor Highway Transportation Co., Mansfield, Ohio, and the Ohio Edison Co., Akron, have been authorized by the Ohio Public Utilities Commission to transfer their trucking certificates to the Cleveland, Canton and Columbus Motor Freight Co.

Lord Macaulay in 1830 Looked Ahead One Hundred Years

(Concluded from page 36)

isted in the world added together; the good of the people studiously rendered dear; the currency imprudently debased, and imprudently restored. Yet is the country poorer than in 1790? We firmly believe that, in spite of all the misgovernment of her rulers, she has been almost constantly becoming richer and richer. Now and then there has been a stoppage, now and then a short retrogression; but as to the general tendency there can be no doubt. A single breaker may recede; but the tide is evidently coming in.

"If we were to prophesy that in the year 1930 a population of fifty millions, better fed, clad and lodged than the English of our time will cover these islands, * * * that machines constructed on principles yet undiscovered will be in every house, that there will be no highways but railroads, no traveling but by steam, that our debt, vast as it seems to us, will appear to our great-grandchildren a trifling encumbrance, which might easily be paid off in a year or two, many people would think us insane. We prophesy nothing; but this we say: If any person had told the Parliament which met in perplexity and terror after the crash in 1720 that in 1830 the wealth of England would surpass all their wildest dreams, that the annual revenue would equal the principal of that debt which they considered as an intolerable burden, * * * that London would be twice as large and twice as populous and that nevertheless the rate of mortality would have diminished to one-half of what it then was, * * * that men would be in the habit of sailing without wind, and would be beginning to ride without horses, our ancestors would have given as much credit to the prediction as they gave to Gulliver's Travels. Yet the prediction would have been true; and they would have perceived that it was not altogether absurd, if they had considered that the country was then raising every year a sum which would have purchased the fee-simple of the revenue of the Plantagenets, ten times what supported the Government of Elizabeth, three times what, in the time of Cromwell, had been thought intolerably oppressive. To almost all men the state of things under which they have been used to live seems to be the necessary state of things. * * * Hence it is that, though in every age everybody knows that up to his own time progressive improvement has been taking place, nobody seems to reckon on any improvement during the next generation. We cannot absolutely prove that those are in error who tell us that society has reached a turning point, that we have seen our best days. But so said all who came before us, and with just as much apparent reason. * * * On what principle is it that, when we see nothing but improvement behind us, we are to expect nothing but deterioration before us?



"It is not by the intermeddling of * * * the omniscient and omnipotent State, but by the prudence and energy of the people, that England has hitherto been carried forward in civilization; and it is to the same prudence and the same energy that we now look with comfort and good hope. Our rulers will best promote the improvement of the nation by strictly confining themselves to their own legitimate duties, by leaving capital to find its most lucrative course, commodities their fair price, industry and intelligence their natural reward, idleness and folly their natural punishment, by maintaining peace, by defending property, by diminishing the price of law, and by observing strict economy in every department of the State. Let the Government do this: the People will assuredly do the rest."

Murphy Household Goods Business, St. Paul, Taken Over by Fidelity Firm

THE Fidelity Storage & Transfer Co., St. Paul, has taken over the household goods storage business of the Murphy Transfer & Storage Co. in that city and has leased the Murphy building at 189 East Third Street. The structure has been fitted up as a new general office and storage warehouse and will be known as Fidelity's Warehouse M. This gives Fidelity three plants in St. Paul. The Fidelity has had a prominent office location in the center of the city, but the new City Hall and Court House building is soon to occupy the entire square, necessitating a vacancy of all buildings, including the Fidelity's corner.

The Murphy firm is now devoting its attention to merchandise storage and to a steadily growing business in daily delivery routes licensed by the State Commission.

Expansion in Montreal

The National Terminals of Canada, Ltd., Montreal, has completed erection of a fireproof warehouse equipped with modern elevators and providing accommodation for private offices and storage space for shippers, distributors, etc., who want exclusive compartments where handling can be done by their own employees.

Rate Should Be Placed on Each Bill of Lading Which Shows a Route

THE importance of placing the correct rate on every bill of lading on which the route is shown is emphasized by W. L. Orton, treasurer of the Empire Freight Co., Inc., Boston, in a letter to *Distribution and Warehousing*. Mr. Orton cites a case as follows:

"In June, 1929, there was delivered to the Wabash Railway at St. Louis one automobile as a carload for shipment to Boston routed 'Wabash—New York Central' with a clause on the bill of lading to 'Stop car on N. Y. C. tracks at Chicago to complete loading.' Car was handled as routed and, on arrival at Boston, freight charges in excess of the through carload rate plus the stop-off charge were demanded.

"After much correspondence it was finally determined that the lowest through rate was on the basis of carload to Buffalo plus the local carload rate from that point to final destination and the stop-off charge, making the freight charges \$41.55 more than had the through carload rate from St. Louis to Boston been applicable.

An Omitted Rate

"Had the shipment been routed via Illinois Cent., C. & E. I., C. B. & Q., or C. & A. to Chicago, thence N. Y. C., the through carload rate would have applied, but the Wabash has no through rates from St. Louis to Boston via Chicago and N. Y. C.

"Through an oversight, the rate was omitted from the bill of lading, and the point of this article is to emphasize the importance of placing a rate on every bill of lading when it is made up, for the Interstate Commerce Commission has held in formal case 22 I. C. C. 349 that:

"Where a shipper's bill of lading contains instructions both as to route and rate, and the rate is not applicable over any route of the receiving carrier, but is applicable over the route of a rival line to which shipper might have delivered the shipment had he so elected, the receiving carrier may forward the shipment over its own line at the rate lawfully applicable, it not being obligated to turn the traffic over to its competitor."

"If the route is shown on a bill of lading and the rate is omitted, the carriers can legally collect the charges applicable via the designated route. Be sure to place the correct rate on every bill of lading on which a route is shown."

Keyser Heads Boy Scouts

Malcolm A. Keyser, president of the M. A. Keyser Fireproof Storage Co., Salt Lake City, Utah, has been elected president of the Salt Lake Council of the Boy Scouts of America.

When you ship goods to a fellow warehouseman—use the annual *Warehouse Directory*.

Johnson Terminal Opens for Business on Ohio Riverfront, Evansville

THE new river-rail-truck terminal and warehouse of the Mead Johnson Terminal Corporation, at Ninth Avenue and West Ohio Street, Evansville, Ind.—a project involving \$450,000 in construction costs—was opened for reception of freight early in January.

The combined terminal and warehouse buildings front on the Ohio river for 585 feet, with the terminal building 113 feet wide, 118 feet deep and 62 feet high, extending in part out over the river, for handling barge load shipments.

The terminal division is a structure of steel resting on concrete piers and with floors of concrete. Walls and roof are lined with glass and corrugated asbestos.

Two electrically-operated traveling cranes, each with carrying capacity of ten tons and speed of 500 feet a minute, are suspended from the steel roof structure to the elimination of interior columns. Each crane has a beam of 54 feet, giving for the two cranes a clear running width of 108 feet for entire length of terminal. They may be operated singly or simultaneously for car and barge loads. A railroad switch traversing the width of the terminal provides for quick interchange of river and rail shipments.

The terminal opens into a warehouse, a modern fireproof structure of concrete, steel and brick, 585 feet long and 151 feet deep, comprising a general and a bonded warehouse. The combined buildings include offices and equipment maintenance shop, uniformly heated. The warehouses have a fire sprinkler system.

The property is equipped with railroad switching trackage for 64 cars. Skid platforms, moved by car lift trucks, are included in the equipment. The terminal is served jointly by the Chicago & Eastern Indiana and Louisville & Nashville railroads, and will also be served by other railroads through reciprocal switching arrangements, and will be radiating point for motor truck lines covering all sections of southern Indiana and Illinois and western Kentucky.



New electric telescoper of the
Economy Engineering Company

Economy Announces New Line of Ball-Bearing Machinery for Lifting

THE Economy Engineering Company, 2653 West Van Buren Street, Chicago, announces an entirely new line of ball-bearing equipped lifting machines. Both hand and power operated, plain and telescoping machines are included in the new development, the machine here illustrated being an electric telescoper of the new type.

Ball bearings, in these new models, are used throughout the gearing and in the sheave and platform frame wheels. On the telescopers the sliding frame wheels are also equipped. Friction is further reduced through recently designed flangeless guide wheels which are used to support the platform and telescoping frames.

An actual 25 per cent increase in

efficiency is claimed as one result of the introduction of these two features. In the new hand power type only 25 pounds cranking pressure is required to lift the rated load. In the 1931 electric models, however, the greater efficiency has been used to provide a proportionately faster travel of platform.

Spur-gear hoisting units are used exclusively, that of the hand power being fully guarded and lubricated with grease. The electric unit is contained in a metal case and runs in a bath of oil. The former has a self-acting gravity brake, while the latter has a dual system, both brakes working automatically to hold the load wherever desired and prevent falling of platform in case of current failure.

The electric machines are equipped with high torque motors of 1/2, 1, 2, 3 horsepower or more, depending on the speed of operation needed. All are controlled alike, unless otherwise specified, by means of a single lever drum switch. A lever attached to the rear of the controller shaft operates the service brake, insuring prompt application at all times.

Automatic limit stops prevent overtravel of platform by returning control lever to "Stop" position, thereby stopping motor and setting brake.

Alemite lubricating system is used on the guide, sheave and base wheels, as well as on the hand power hoisting unit.

Loving Cup to Mills, 50 Years in Business

AFTER half a century of continuous service with the White Line Transfer & Storage Co., the Des Moines, Iowa, firm, of which he is president, P. J. Mill was on Dec. 24 presented by his employees with a silver loving cup. Mr. Mills entered the transfer business in 1880 and, acquiring full ownership eight years later, added storage facilities which were, according to the Des Moines *Tribune-Capital*, the first ever offered to the public in Iowa.

The presentation of the cup on behalf of the employees was made by L. E. Stone, the firm's vice-president and manager.



At the new Mead Johnson terminal on the Ohio riverfront in Evansville, Ind. Excavator at far left is digging a channel for barges to load and unload under steel awnings

Death Takes O. C. Mackay, President of Cold Storage Division of the A. W. A.

O DIN C. MACKAY, general manager of the Quincy Market Cold Storage & Warehouse Co., Boston, and who was president of the cold storage division of the American Warehousemen's Association, died on Jan. 8 at his home, 136 Woodward Avenue, Newton Highlands, Mass., after a relatively short illness. Funeral services were held at the Trinity Church, Newton Center, and were attended by representatives of the American Warehousemen's Association and the Massachusetts Warehousemen's Association, of which he was a member.

"Mr. Mackay had long been a prominent figure in the cold storage industry and was a faithful and conscientious worker in the affairs of the American Warehousemen's Association and allied organizations," said a bulletin sent to the cold storage division's members by W. M. O'Keefe, Chicago executive secretary. "The charm of his personality attracted to him a host of men throughout the country, each of whom regarded it as a high honor to be included in his circle of friends. Few if any of those who were acquainted with Mr. Mackay could fail to take cognizance of the magnetism of his character. In his passing our industry has suffered a great loss."

Born on May 31, 1881, in St. Louis, Mr. Mackay prepared at St. Mark's School and was graduated from Harvard in 1904. He began his business career in Omaha with Armour & Co. and in 1918 went to Boston to become manager of the Boston Terminal Refrigerating Co.

Mr. Mackay had been a member of the Boston Rotary Club since 1918, served on its board of directors, and at the time of his death was chairman of the boys' work committee, which supervises the club's student loan fund. He was a member of the Institute of 1770, the Phoenix Society, the D. K. E. Society, the Brae Burn Country Club, the University Club, the Boston Chamber of Commerce and the Dalhousie Lodge of Masons in Newton.

Mr. Mackay is survived by his widow, Mary Zollinger Mackay; a daughter, Miss Mary Mackay, and his mother, a sister and two brothers.

J. I. Buchanan

JAMES ISAAC BUCHANAN, president of the Pittsburgh Terminal Warehouse & Transfer Co., Pittsburgh, died on Jan. 2 at the age of 77 years. He was a member of the cold storage division of the American Warehousemen's Association and of the Pennsylvania State Warehousemen's Association.

Mr. Buchanan was president also of the Washington Oil Co. and of the Taylorstown Natural Gas Co. Last year Allegheny College conferred upon him the degree of Doctor of Laws.

Death was attributed to heart disease while ill in a hospital a few days after Mr. Buchanan had fallen on an icy sidewalk and suffered a broken hip bone.

Long prominent in Pittsburgh's business, social, civic, educational and fraternal affairs, Mr. Buchanan was born in Hamilton, Ont., on Aug. 3, 1853, of a family distinguished, in Great Britain and Canada, in civil and military activities. He began his business career with a wholesale drygoods house. In 1877 he became a clerk with the Oil City Trust Co. and later was secretary and business manager to the late J. J. Vandergrift, noted Pittsburgh oil operator, and became one of the trustees of the Vandergrift estate.

From 1904 to 1916, when he resigned, Mr. Buchanan was president of the Pittsburgh Trust Co. At the time of his death he was president of the Taylorstown Natural Gas Co. and an officer or director of other financial and utilities organizations. He was a past chairman of the Pittsburgh Art Society, a past president of the Academy of Arts and Sciences, and a member of numerous societies, some of them national in character.

Prominent in Masonry, Mr. Buchanan was considered an authority on Masonic history and literature and had held various high fraternal offices.

The degree of doctor of laws was conferred upon Mr. Buchanan last June by Allegheny College, Meadville, Pa.

Charles N. Fitz

DEATH on Jan. 10 removed Charles N. Fitz, president of the Francis Fitz Co., a merchandise warehouse firm at 30 Pittsburgh Street, Boston. He died at his home at 112 Homer Street, Newton Center.

Mr. Fitz was a member of the merchandise division of the American Warehousemen's Association and of the Massachusetts Warehousemen's Association.

Born in Massachusetts on March 20, 1871, Mr. Fitz studied at Bryant and Stratton's Commercial School and entered the wool business, in which he was engaged for many years. On the death of his father in 1915 he succeeded him as president of the Fitz organization.

Mr. Fitz was a member of the Exchange Club, the Charles River and Eastern Ho Country clubs and the Dalhousie Lodge of Masons in Newton. He is survived by his widow; a son, Charles N. Fitz, Jr.; a daughter, Harriet Jaqueth Fitz, and a sister and a brother.

John Wetzel

JOHNN WETZEL, proprietor and president of the Lamasco Transfer Co., which operates a merchandise warehouse and trucking business in Evansville, Ind., died on Dec. 31 in an Evansville hospital after an illness of two days. He was 66 years old.

Born in Evansville, he became associated with his father in the Lamasco firm, which he developed into one of the largest transfer organizations in the city.

Mr. Wetzel was a director of the Lamasco Bank, which he helped found; a stockholder in the Pauline Hosiery Mills,

Automobile Liability Premiums Are Higher in 23 States in 1931

GREATER premiums for public liability and property damage insurance will be paid by automobile drivers in twenty-three States in 1931 as a result of a survey of losses covering the years 1926 to 1929, the National Bureau of Casualty and Surety Underwriters has announced. The States declared to be affected are:

Arizona.
Colorado, Connecticut.
Idaho, Illinois, Indiana.
Kansas, Kentucky.
Michigan, Missouri, Montana.
Nevada, New Jersey, New Mexico.
Ohio, Oregon.
Pennsylvania.
Rhode Island.
Tennessee.
Utah.
Virginia.
Washington, Wyoming.

Greater speed, improved highways allowing year-round use of cars, closed automobiles allowing the same thing, and increased congestion, are given as the reasons for the increases.

General, St. Louis, Sterilizes Clothing Given to the Needy

DURING the period of depression the General Warehousing Co., St. Louis, has been cooperative effectively with the St. Louis Star and the police authorities in the campaign of the Star to provide clothing for destitute persons.

In response to an appeal by the newspaper, many St. Louis families sent clothing to a relief station established by the Star. Men and women whom the police found to be in need were given certificates, which were exchanged for clothing at the station.

In order to prevent any possible spreading of disease, the General Warehouse Co. volunteered to sterilize, free, all the clothing collected. Representatives of the General have been making daily calls at the relief station, obtaining clothing to be cleansed and delivering clothing already sterilized with cyanide in the General's Plymetal vault.

and a member of the Chamber of Commerce, the Masons and the Motor Truck Association of Indiana.

L. R. Bailey

AT the age of 71, L. R. Bailey, founder and president of the L. R. Bailey Transfer & Storage Co., Emporia, Kan., died on Nov. 29. He had conducted the business for about four decades, having started with a small transfer line.

Mr. Bailey was a member of the National Furniture Warehousemen's Association and of the Kansas City Warehouse & Transfermen's Association.

12 Railroads Entering New York Accept Plan for Union Freight Depot

THE Port of New York Authority announced on Jan. 5 that it had completed negotiations with the twelve railroads serving the port district for the operation of the \$13,000,000 union inland freight terminal which it will build on the block bounded by Eighth and Ninth Avenues and Fifteenth and Sixteenth Streets and that the railroads had signed an agreement to use the building as their central point in the delivery and collection of less-than-carload freight bound to and from New York.

Under the agreement, signed by the presidents of eight railroads acting for twelve lines, the carriers will organize an agency which will operate the terminal on terms fair to all roads, and the Port Authority pledges itself to build other terminals in the future if the first experiment is successful and the need for additional facilities arises.

Shippers and consignees in the port district will be served more efficiently, it is expected, and without any added cost, by the creation of a central delivery point, from which the railroads will truck the freight which they must carry to their rail-ends for outbound delivery or deposit inbound freight for collection by the trucks of consignees.

The Signers

The contract was signed by the presidents of the Baltimore & Ohio, Central Railroad of New Jersey, Erie, Delaware, Lackawanna & Western, Lehigh Valley, New York Central, New York, New Haven & Hartford and Pennsylvania Railroads. The signature of the Pennsylvania also provides for freight on the Long Island Railroad; that of the New York Central for the West Shore and the New York, Ontario & Western Rail-

roads, and the Central of New Jersey for freight originating or destined to points on the Philadelphia & Reading.

The agreement covers all points relating to installation of equipment or other property, compliance with all laws, and provides that "in the event of the transfer of the entire property of any of the carriers or of their franchises respectively by consolidation, lease, merger or otherwise, pursuant to law, then the rights, interests, obligations and liabilities of such carrier or carriers under this lease shall be deemed to follow the transfer of such properties and franchises respectively."

16 Months to Build

The contract with the railroads is dated Dec. 31, 1930, and provides that the terminal shall be completed within sixteen months of that date. The site will be made ready for excavation within sixty days, according to John F. Galvin, chairman of the Port Authority.

Mr. Galvin explained that the structure as planned would provide service to shippers and consignees of package freight on the street floor with no interference to normal street traffic, as the trucks would be berthed within the building, inside the street lines. Only two floors of the fifteen-story building will be used for the handling of freight, the thirteen upper stories to be leased for office space and a percentage of the income used to amortize the cost of the new building and the service it makes possible. The terminal building will be specified by the railroads in their tariffs and will be kept open for the receipt and delivery of freight during such hours as the railroads believe are best in facilitating the handling of the traffic.

The new station will represent an investment of about \$16,000,000 by the Port Authority, when the cost of the site, the razing of buildings and engagement of architects and engineers is included.

1931 Watch the Iron AMERICA and Steel Barometer

By
JOHN H. VAN DEVENTER

Those of us who are scanning the business horizon in the hope of discovering the ray of sunlight which will foretell the coming of better days should watch the iron and steel barometer closely during the next few weeks.

Regardless of what business one is in, whether it is the building of bridges which require lots of steel, or the merchandising of products which have none at all in their make up, changes in the steel situation are of great importance at this time. Progressive betterment in this industry, sustained over a number of weeks will do more to restore confidence than any other single factor.

Changes in the iron and steel outlook are sensed in the industry itself days and sometimes weeks before the records reflect them. This is quite natural, since the men in that industry must be aware of changes in potential demand that are in advance of changes in actual orders.

While the records of production and price in this industry have continued to decline up to January 1, 1931, "inside" sentiment and information, may be said to have now turned the corner. We may therefore look for the progressive betterment of both backlogs and production very shortly.

A part of this betterment, it is true, will be seasonal. But it may be predicted that there will be a substantial improvement in the position of the industry in addition to seasonal gains.

So if you would like to be among those who will see the coming ray of sunlight, watch the iron and steel industry during the next few weeks.

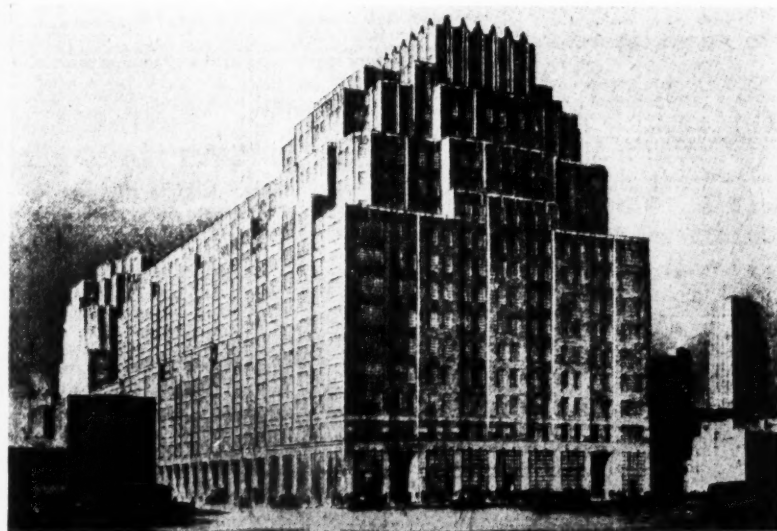
Copyright, by United Business
Publishers' Bureau of Economics

Pennsylvania Opens Great Terminal on Jersey Waterfront

WITH three units completed at a cost of \$17,000,000, the new \$70,000,000 Pennsylvania Railroad terminal development on the Jersey City waterfront—known as the "rail-to-keel terminal" and operated by the Pennsylvania Dock & Warehouse Co.—was formally opened on Jan. 6 with exercises attended by railroad officers, the State, the Port of New York Authority and heads of industrial, marine and warehousing organizations.

"The Pennsylvania Railroad," said George Le Boutillier, a vice-president, at a luncheon, "is proud of its latest contribution to the port of New York. While it has reached the point of completion at a time when business is at its lowest ebb, storage in both the cold and dry warehouses is proceeding in a satisfactory manner and we are optimistic as to the ultimate success of the undertaking."

After the luncheon the visitors inspected the storage warehouse, on each side of which are the 1000-foot piers, capable of berthing the largest ships that have contracted to use the site. The terminal extends from Exchange Place to First Street, Jersey City. When completed it will include seven modern piers, several warehouses and other buildings.



Design of the \$13,000,000 terminal to be built in New York for handling less-than-carload freight for twelve railroads

Sydney Green Joins Gerstenslager and Will Cover South

ANNOUNCEMENT is made by G. W. Way, superintendent of The Gerstenslager Co., manufacturers of special built truck bodies, Wooster Ohio, that Sydney Green, who recently resigned as executive secretary of the Southern Warehousemen's Association, Mr. Green's title will be that of southern representative.

"We feel," according to Mr. Way, "that Mr. Green's connection with us should materially aid our service to the southern warehousemen, as he is acquainted with their various problems and will within a few weeks become active in covering the States of Louisiana, Mississippi, Alabama, Tennessee, Georgia, South Carolina, North Carolina, Virginia, Maryland, Delaware, Florida and Kentucky.

"We are producing, in addition to our high-grade vestibule type van bodies, a new line of freight type van bodies which should be of special interest to freight haulers and general transfer men throughout the country. Having recently increased our facilities for producing this equipment under the most efficient conditions, we feel that Mr. Green will be able to offer something worth while to his former associates in the warehouse and distribution business."

Mr. Green is widely known to both household goods and merchandise warehousemen throughout the country. Prior to becoming executive secretary of the Southern Warehousemen's Association—a position which required his attendance at conventions of the National Furniture Warehousemen's Association—he was president of the old Southern Bonded Warehouse Corporation, Petersburg, Va., and was active on several committees of the American Warehousemen's Association.

Indiana Motor Freight Lines Form Association

ABOUT twenty-five motor freight line operators in Indiana organized on Jan. 7 the Indiana Association of Certified Haulers. It is planned to enlist as members some ninety holders of truck line certificate holders, including warehouse companies, under the Public Service Commission, according to Louis K. Murchie, elected secretary-treasurer.

Reed Dixon of the K. I. & M. Transit Co. was chosen president and H. H. Hedges of the Terre Haute Union Transfer & Storage Co., Terre Haute, was elected vice-president.

California Cold Storage

During the eighteen months ended Sept. 30 last, cold storage warehouses in California increased from 59 to 64, according to a report made public at Sacramento in January by Dr. Walter M. Dickie, director of the State Department of Public Health.

On Sept. 30 there were 150,488,060 pounds of various food products in storage, together with 997,514 cases of eggs and 854,314 gallons of beverages and fruit juices, the report stated.

For the Man Who Closes His Mind:

WHEN a so-called business man declares, with a voice of finality, "I haven't any time to read," you can be certain that he also hasn't time to succeed.

Every line of business today—and warehousing is not an exception—is influenced by hundreds of factors. No one individual can equip himself to gather these facts out of thin air by hunch, by guess and by gosh.

Intelligent decisions comes to the man who uses his business paper to find out the trend and the future influences on the complete problems entering every business.

Imagine an engineer, doctor or lawyer saying "I haven't any time to read." Instantly you visualize a man who has closed his mind to the latest discoveries.

Only a poor organizer finds himself without time to read. No ambitious, aggressive and progressive man of affairs can afford to do without his daily reading.

A business magazine is indispensable to both the man and his business.

Ye Ed. Liberally Remembered During Yuletide's Season

(Concluded from page 23)

YE ED'S opening verse & Ralph's rhythm was pretty good but you should read what Frank Elden Homes, the Jamaica, N. Y., storager-poet discovered by *Two Bits*, has written special for these columns. It is titled:

The Song of the Dead

We are the Dead. 'Tis we who ride
The thundering horses of the dawn.
We paint the pictures on the sky
At sunset when the night is born.
'Tis we who send the singing breeze
And we who chant the melodies
Of whispering leaves and hold the stars aloft.
We draw the curtain of the night.
We send the moon's soft, silver light
Far down to you; then all anew
We bring you back the day.
We try to guide you through the years.
You never know who stills your fears
Or sends you peace; when trouble rides
Across your surging, mortal tides.
I tell you 'tis ourselves; the silent Dead.
For we are just a part of God.
And He, in all His wisdom, made
A place for us in sunshine
And a place for you in shade.
And we are laugher. Yet you grieve.
Ah, do not grieve for us.
But ever thus it has been
And it will be ever thus.
So is it said
By all the Dead.

1931 AMERICA

FORWARD MARCH

Consumer-Demand Notes Falling Due

By

JOHN H. VAN DEVENTER

Some consumer-demand notes are renewable; others must be paid on the nail.

The old overcoat can be made to do for an extra season, shoes may be half-soled a time or two, the old bus can be coaxed into giving four or five thousand miles more than it wants to, and the house can be made to stand up for the winter without that much needed coat of paint. Sooner or later, however, these consumer-demand notes must be paid.

On the other hand, there is not much elasticity about food, rent, coal and the income tax.

Those industries whose products fall into the class in which buying can be postponed always suffer most during a depression, but have the biggest pickup afterwards.

During the depression of 1921, for example, the food industries felt a curtailment, as compared with 1920, of but 1½ per cent. Whereas the iron and steel industry was hit for a loss of 52 per cent. In 1922, however, the food industry was only picked up to the tune of 13 per cent, whereas iron and steel manufacturing jumped 80 per cent.

When postponed buying boosts up the savings bank accounts, as it has during the past year and a half, it simply means that those industries which have to wait will eventually have their reward. The money is accumulating—not for food or rent—but for new coats, new cars and new shoes.

Consumer-demand notes issued for new babies have been renewed now until they are past due, judging by the number of postponed marriages. Thousands of young couples have put the happy day ahead, during the past year, until the prospects appear brighter. As soon as the sunshine breaks through, we shall see a rush on the license bureau. Then business will pick up in homes, furniture, wedding gifts and eventually in nursing bottles.

It won't be long now!

Copyright by United Business
Publishers' Bureau of Economics

Patterson Company Occupies New Plant

THE Patterson Transfer Co., Memphis, moved into its new warehouse home at Georgia Avenue and Pennsylvania Street on Jan. 17. Foundation, walls, floors and roof are all of concrete, not a nail having been used in the construction. It is a two-story building containing approximately 50,000 square feet of floor space and has Frisco railroad trackage and is served by the Mississippi-Warrior waterways line.

The plant houses also brokers' space and the offices of the Galloway Coal Co., of which Robert Galloway, president of the Patterson Transfer Co., is president.

The Shaw Warehouse Co. has been incorporated to do a general warehousing business in Columbus, Ohio. Capital, 250 shares of no par value stock. The incorporators are Joseph J. Klein, George F. Hessoun and B. F. Seigel.

When you ship goods to a fellow warehouseman—use the annual Warehouse Directory.

Nye Bill Would Make Trade Practice Rules Legal After Approval

DISTRIBUTION AND WAREHOUSING'S
Washington Bureau,
1163 National Press Building.

TRADE practice rules, when approved by the Federal Trade Commission, would have a status of statutory law under the provisions of a bill just introduced by Senator Gerald P. Nye, Republican, of North Dakota.

Such a proposal is bound to be highly controversial when considered in Congress. While it is likely to have vigorous support from some of the trade associations which desire to see an end to the anomalous character of trade codes as formulated in trade practice conferences, determined opposition to the Nye proposals will come from other sources.

The Nye measure purposes to amend Section 2 of the Clayton Act so as to extend the judicial arm of the Government to the Federal Trade Commission. Among other things, it would give the effect of law to trade practice rules after they had been approved by the Commission. It would enable the Commission to cite offenders against these rules and to assess penalties for infringements.

"The measure is framed to assist all independents, no matter what their industry, but putting teeth into Section 2 of the Clayton Act, empowering the Federal Trade Commission to take jurisdiction in case of alleged discrimination, unfair trade practices, etc., and assess punitive damages in case of convictions," Senator Nye explains. "The amendment gives the Trade Commission authority to receive complaints and hear testimony, however, on various other phases of unfair competition and practice, as follows:

"Where dealers or producers sell or advertise merchandise the quality, weight or food content of which falls below standards prescribed by the pure food and Drug Act.

"Where commodities are sold below cost, or without profit, as a trade incentive or inducement to injure a competitor.

"Where parties to trade agreements approved by the Trade Commission sell goods subject to interstate commerce regulations, in violation of such agreements.

"Where materials are imported to the injury of individuals or corporations engaged in producing and selling such commodities of exclusively American origin or for strictly domestic consumption. This bears directly on petroleum imports.

"Where producers of domestic materials are dependent upon monopolistic facilities owned by others, as for instance, pipe lines and transportation facilities."

The paragraph of the bill dealing directly with the trade practice issue, reads:

"The Federal Trade Commission is hereby empowered and directed to receive complaints and hear testimony as to any alleged unfair trade practices, to

wit: (3) Or where any party to any agreement approved by the Federal Trade Commission in respect to the production, distribution, sale or other disposition of natural, manufactured or other products and subject to interstate commerce regulations, which agreement, arising from any trade practice conference authorized by the Federal Trade Commission, is alleged to have violated by any party or parties thereto, or whose business has been materially injured by any competitor engaged in a similar line of trade."

When Senator Nye was asked if this language would have the effect of making trade practice rules "law" when approved by the Federal Trade Commission, he said: "That's exactly what we are trying to do."

According to those who have studied the trade practice conference procedure, the weakness of it has been in the enforcement of the rules once they have been agreed to and approved by the Commission. The Nye bill is an attempt to eliminate that weakness.

However, if the Federal Trade Commission may approve trade rules and on that approval they take on the character of law, the Federal Trade Commission, in that procedure, "legislates." There will be strong opposition to vesting in a Commission an element of legislative power, which is presumed to rest only in the Congress of the United States.

Whatever may be the outcome, the Nye bill has aroused considerable interest here. There is enough controversial material in it to warrant the prediction that it will not get to final action in this session of Congress. That it will be advanced in this session to the stage of public hearings also is doubtful.

—Horace H. Herr.

Freight By Air

TRANSCONTINENTAL & WESTERN AIR, INC., New York, one of the larger airline systems, has recently mailed out an announcement to a selected list of distributors, offering them a 36-hour coast-to-coast shipping service, with New York and Los Angeles as the main terminals. This is the same speed at which transcontinental air mail is now being transported.

The rate set is stated by the operators to be the lowest yet quoted for the distance covered—coast-to-coast—and it is understood that it will go still lower, in time, as volume business develops.

Among the first to respond to the announcement were a dress goods house, a cut-flower dealer and a film distributor.

Service must necessarily be limited, at the start, to shippers who will contract for space on a schedule basis.

1931
AMERICA

Time Works for
Recovery

★ ★ ★ ★ ★
FORWARD
MARCH

By
JOHN H. VAN DEVENTER

Old Father Time is one of the best friends that depressed business has. He is not a fast worker, but he never gives up, and day by day he is pulling his extremely effective weight on the side of recovery.

One of his favorite tools with which he promotes better business, is obsolescence. It is with this that he makes things wear out. Often, too, he makes things obsolete without wearing out.

Take machinery, for example. Twenty-five years ago, manufacturers used to charge off an average of 5 per cent each year for obsolescence on producing equipment. This meant that they expected their machinery to last twenty years before it needed replacing. Ten years ago the average depreciation rate had jumped to 10 per cent, and today, on a good part of our active equipment it is closer to twenty. In other words, the expectable useful life of a large part of our machinery has shrunk to five years.

This does not mean that it will actually wear out in five years time. It means that during this period somebody will probably devise a machine so much better than the old one that it will pay the manufacturer to throw it out—even if not worn at all—and put in the better one. A large part of our machine tool equipment will be obsolete within five years because of the recent introduction of cutting tools that cut metals so fast and furiously as to require new and stronger designs of machine tools so as to make full use of them.

Automobile owners know something about obsolescence at first hand. That 1923 model, for example, does not seem just the thing today, among all of these classy new eight, even though it may still be hitting on all six.

Women do not know much about obsolescence, but just try to keep them from buying a new hat or dress when the style changes!

Father Time has been patiently hammering away at this depression for the past eighteen months and it begins to look as if he had it wobbling. Let's help him along by replacing some of our own things that have been getting out-of-date.

Copyright by United Business
Publishers' Bureau of Economics

LaBelle Co. Expands

The LaBelle Safety Storage Co., Minneapolis, has purchased the business of the Flour City Transfer & Storage Co. and has taken over the warehouse of the Powers Transfer & Storage Co., both in Minneapolis.

The Powers plant, with a capacity of about 25,000 cubic feet, is at 611 West Lake Street, in a residential district. Richard LaBelle, vice-president, will manage it.

Haslett to Box Planes

THE Haslett Warehouse Co., operating merchandise storage plants in San Francisco and other California cities, has added to its activities the boxing of airplanes and automobiles for export.

The new activities are being carried on through the Morgan & Company Drayage, 764 Clay Street, San Francisco, identified with the Haslett interests.

Ferguson Assures Complete Protection of Warehousing Premiums in Consolidated

THE New York State Superintendent of Insurance has issued a 1931 certificate of solvency and financial responsibility to the Consolidated Indemnity & Insurance Company, in which members of the National Furniture Warehousemen's Association are policyholders to the extent of more than \$120,000, and the Consolidated has severed all connection between it and the Bank of United States, one of the New York City financial institutions which was recently closed, and in which the Consolidated had deposited cash funds amounting to nearly \$2,125,000.

According to Robert M. Ferguson, New York insurance expert, who wrote the warehousemen's motor vehicle policies with the Consolidated, the storage executives who are policyholders will be fully protected against any losses arising out of the closing of the Bank of United States. Mr. Ferguson, who on Jan. 8 was elected a director of the Consolidated at the stockholders' annual meeting in New York, extends, through *Distribution and Warehousing*, such assurance of protection of the warehousemen's premiums.

Following the closing of the Bank of United States there was organized the Annuity Holding Corporation, which purchased a large block of Consolidated's stock, and the Annuity, according to Mr. Ferguson, is in a position, financially, to protect all the policyholders.

The Consolidated is continuing to write policies, and during the first seven days of January alone it wrote \$180,500 in gross premiums, according to the report of the president, John F. Gilchrist, to the stockholders on Jan. 8.

Distribution and Warehousing was informed on reliable authority on Jan. 9 that within a few weeks there would be elected, as new directors of the Consolidated, a group of men representing some of the strongest financial interests in the United States. At the stockholders' meeting on Jan. 8 the directors who were re-elected include Alfred E. Smith, formerly Governor of New York, and the new directors chosen include Harry L. Davis, formerly Governor of Ohio.

The Consolidated's statement regarding the forming of the Annuity Holding Corporation was issued on Jan. 6 and was read by Mr. Ferguson on the following day at the annual meeting of the New Jersey Furniture Warehousemen's Association at Newark. It reads:

"The Annuity Holding Corporation, which, as stated in the press, purchased a large block of stock of Consolidated Indemnity & Insurance Company, is not and has never been identified or connected with the Bank of United States or any of its affiliates in any way. None of the officers, directors or stockholders of Annuity Holding Corporation is now or ever has been identified or connected with the Bank of United States or any of its affiliates.

"The purchase was made by Annuity Holding Corporation, the treasurer of

which is Rolland R. Rasquin, the executive vice-president of Consolidated Indemnity & Insurance Company in charge of the latter's business operations, on behalf of an entire new group. None of the past or present directors, officers, employees or stockholders of the Bank of United States or its affiliates is a member of this group."

The financial responsibility of the Consolidated was pledged by Mr. Ferguson at the New Jersey meeting and also at the annual meeting of the New York Furniture Warehousemen's Association on Jan. 5.

At the Consolidated's stockholders' annual meeting on Jan. 8 six of the company's 1930 directors who were directors also of the Bank of United States were not re-elected directors of the Consolidated. They are Joseph C. Brownstone, Joshua L. Cowen, J. L. Hoffman, C. Stanley Mitchell, I. H. Rosenthal and Reuben Sadowsky. Prior to the meeting of the Consolidated, Bernard K. Marcus, Saul Singer, Isidor J. Kresel, A. S. White, J. L. Hoffman and C. Stanley Mitchell has resigned as directors of the Consolidated. A. E. Lefcourt and Gerhard Kuehne also had resigned as directors.

The men who were re-elected as Consolidated directors, in addition to former Governor Smith, are George J. Atwell, of the George J. Atwell Co., Inc., and William F. Kenny, of the William F. Kenny Co. John F. Gilchrist was re-elected president and Rolland R. Rasquin was re-elected executive vice-president. Three vice-presidents and the comptroller also were re-elected.

The new directors chosen, in addition to Mr. Ferguson, who is president of Robert M. Ferguson & Son, Inc., and former Governor Davis of Ohio, who is engaged in the insurance business in Cleveland, are Henry C. Meigs, in the insurance business in Milwaukee; A. Bertam Samuels, a New York attorney; and Charles F. Zeltner and Otto H. Kroeger, both members of C. F. Zeltner & Co., members of the New York Stock Exchange.

In his report to the stockholders on Jan. 8, Mr. Gilchrist, president, said:

"On Dec. 11, 1930, the day on which the Bank of United States closed, your company had on deposit in said bank \$2,124,831.87, against which deposit a reserve of 50 per cent has been set up on the liability side of the company's Dec. 31, 1930, balance sheet, amounting to \$1,062,415.94."

He then gave a report of the balance sheet of the company, showing total assets, after deducting all depreciations, of \$6,930,943. The liabilities, including reserves of \$399,703 for outstanding premiums, reserve for claims of \$1,199,080, and reserve of \$1,743,827 for unearned premiums, are set forth as totaling \$5,090,196, thus leaving a capital of \$1,200,000 and a net surplus of \$640,747, or a surplus as to policyholders of \$1,840,747.

The statement submitted by the president also shows that during 1930 the Consolidated wrote total premiums of \$4,488,688, and received interest and dividends on investments of \$252,129.

Regarding the closing of the Bank of (Concluded on page 59)

1931 AMERICA ★ ★ ★ ★ ★ FORWARD MARCH

Next Generation Will Have No Bread Lines

By
JOHN H. VAN DEVENTER

The long haired inventor who has been pictured to us as struggling for years to perfect some marvelous mechanical or electrical contraption, while his wife supported the family by taking in washing, is not much of a factor in today's industrial progress. His work is being done much better, much more quickly and effectively by the keen minded "research man" whose working quarters are well equipped laboratories instead of dusty attics. Most of our marvelous new materials, our improved devices and modern machinery come from these research laboratories. No pains are spared to probe with infinite details, the hidden mysteries of science, in the hope that out of the patient plodding may come some hitherto undiscovered treasure.

Largely as the result of such scientific research, our products of industry and our production methods are far more advanced than our distribution and marketing of goods. It is no exaggeration to say that our making of things, today, is five years in advance of our marketing of them.

One of the present day movements which promises to correct this lag is the spread of market research. Entire industries, as well as individual concerns, need to know more about facts and principles underlying scientific distribution of their products. And so research laboratories are springing up—not equipped with test tubes, microscopes and furnaces, but with maps, charts and statistics and keen minded business analysts whose job is to probe markets and selling methods with the same patient care that the research scientists have applied to physical and chemical mysteries.

Out of this market research will inevitably come a great reduction of distribution costs which will broaden the market for many products. Out of it too, and sooner than one might think, will come a better understanding of the laws of consumption and hence a better balancing of supply and demand.

Product research, by giving us new things to make, and market research, by showing us how to distribute a maximum of them without overproduction are the research twins that will do the most to solve the problem of steady employment. Fluctuations in business will probably go on for many years to come, but the next generation won't know much about bread lines and soup kitchens.

Copyright, by United Business
Publishers' Bureau of Economics

Position Wanted

MAN with eighteen years' of experience in household goods warehousing desires to establish a new connection. Has long been manager of a leading central western furniture storage depository. Familiar with packing, shipping, automobile storage long distance hauling. Will take position anywhere.

Address Box A-453, care of *Distribution and Warehousing*, 249 West 39th Street, New York City.

1931
AMERICA

★★★★★
FORWARD
MARCH

Industry Must Accept Challenge of Unemployment

By
JOHN H. VAN DEVENTER

"No machinery will be allowed on this job. The work will be done with picks, shovels and wheelbarrows." Thus reads the announcement of the letting of a recent county road contract in New England, put forward to aid the unemployed.

You have probably heard or read of proposals that America do away with some of its machinery so as to make jobs for more men. It has also been urged that science and invention be asked to take a ten-year vacation, so that we can catch up with them.

Cutting down on machinery does not make more work. It makes more time required to do the same amount of work. There is a good deal of difference in these two things.

Ford uses conveyors, as do all other motor car makers, to do most of the lifting and carrying of materials and parts through the plants, from building to building and even from machine to machine. Suppose he did away with all of this conveying machinery so as to employ more men. What would happen?

First, he would have to spread his present enormous plant at Fordson, Detroit, over about twice as much area as it now occupies, because there would not be room within it at present to contain half the extra number of men who would be needed to do the lifting and carrying. They would be falling over each other in the hectic struggle to go back and forth. It is doubtful if the whole working population of Detroit, if put at this work, would be able to do the same amount of work that these conveyors do day after day with practically no human aid.

Second, he would have to triple or quadruple the price of his cars in order to get enough money to pay all his extra labor. And that, of course, would cut his sales down to a small fraction of their present volume. For the car would be out of the average person's reach.

Stepping down efficiency is not the way to cure unemployment. The pick and shovel method may be permissible as a temporary relief measure, but it won't get us anywhere.

Industry and business must find the way to balance employment, wages and hours without injury either to the man or the machine. We need to keep both of them busy, if we are to maintain our social economic progress.

Copyright by United Business
Publishers' Bureau of Economics

Planes Are Used as Moving Vans

WHEN National Air Transport transferred its office and shop equipment from its old terminal at Hadley Field, N. J., to its newly completed quarters at the Newark Metropolitan Airport, on Jan. 7, its eastern fleet of eleven planes was pressed into use for the job.

The planes, with a carrying capacity of more than ten tons were temporarily converted into moving vans.

Ferguson Assures Complete Protection of Warehousing Premiums in Consolidated

(Concluded from page 58)

United States and its effect on the affairs of the Consolidated, President Gilchrist said:

"Your company was affected by the closing of the Bank of United States in the following three ways: 1. The fact that your company's cash funds to the extent of \$2,124,831.87 were on deposit in the Bank of United States resulting in: (a) A drop in your company's surplus on the balance sheet above set forth to the extent of (b) The loss to your company for some time to come of investment income due in the inability of your company to invest the said \$2,124,831.87.

"2. The fact that the company was obliged on Dec. 11, 1930, to write out of its portfolio entirely 7000 Bank of United States units, as I have indicated above, resulting in a shrinkage in the year 1930, in the surplus of the company, as shown on its balance sheet, of \$486,000, which figure I have previously set forth in this report. On 5000 of the 7000 Bank of United States units the company had previously written off as depreciation in the year 1929—\$572,394, which was reflected in the company's balance sheet of Dec. 31, 1929, submitted at the last annual stockholders' meeting. After having written off as of Dec. 31, 1929, this last mentioned sum of \$572,394, each month during the year 1930, as the Bank of United States units declined in the market, depreciation was written off, so that on Nov. 30, 1930, your company was carrying these 7000 Bank of United States units on its books at a valuation of \$14 per unit. On Dec. 11, 1930, the day on which the Bank of United States closed, the last and final amount, to wit, \$98,000, was written off and the 7000 units set up at a figure of zero.

"3. Your company had executed the following depositary bonds for the Bank of United States as principal:

"(a) A bond covering general funds of the State of New York deposited in the Bank of United States in the penal sum of \$1,000,000. The company has nineteen other companies as its co-surers and reinsurers on this bond to the total of \$820,000, leaving your company's net retention \$180,000. No loss is expected under this bond, as the State of New York under the law has a preferred claim against the bank for its deposit and cannot, therefore, fail to receive its money in full from the bank.

"(b) Your company was the reinsurer of another surety company on three bonds the total penal amounts of which aggregate \$50,000. The amount on deposit in the Bank of United States of the concern to which these three bonds were issued was such that your company's share of the loss on all three bonds will be \$750.40, for which amount a claim reserve has been established on

your company's books and is reflected in your company's balance sheet.

"(c) A bond to the Superintendent of Insurance of New York covering deposits of 'liquidating insurance monies' which deposits at the time of the closing of the Bank of United States amounted to \$7,392. As these are State funds for which the State has a preferred claim, no loss is expected on this bond.

"(d) A bond in the sum of \$3,000 covering the deposits of Walgreen Drug Co. of Chicago, Ill., which company had a balance on the day of closing of the Bank of United States of \$729. Your company has paid this claim, and the payment is reflected in the balance sheet above mentioned.

"It would be a fallacy for me to state that the closing of the Bank of United States had only affected this company in the three aspects just mentioned. It is difficult within the compass of this report to bring home to you the embarrassment which your officers and employees throughout the country have experienced since the closing of the Bank of United States. All of your company's personnel, however, have not permitted their zeal for the institution to be in any wise shaken. The embarrassment has only spurred them on to greater efforts, such is their loyalty to your company. That this is not an assumption on my part is conclusively proved by the fact that the gross premiums (less cancellations and returns) written by your company during the trying month of December, 1930, totaled \$357,031.92, and that in the first seven days of January, 1931, your company has written \$180,520.17 in gross premiums (less cancellations and returns).

"This enables me to here state to you that I believe, now that the decks have been cleared, you may confidently look forward to an excellent showing for the year 1931 for your company. During that year we will make sure that you receive quarterly statements, showing your company's balance sheet quarterly, which we have every reason to believe will show you a steady upward curve."

Simplification of Truck Tires

THE Department of Commerce's printed pamphlet on simplified practice recommendation R103-29, covering industrial truck tires, is now available, according to an announcement by the Division of Simplified Practice of the Bureau of Standards.

Copies of this recommendation, which has been instrumental in establishing dimensions for widths of tires and nominal wheel diameters, can be obtained for 5 cents each, from the Superintendent of Documents, Government Printing Office, Washington, D. C.

When you ship goods to a fellow warehouseman—use the Warehouse Directory.

New Incorporations as Announced Within the Storage Industry

California

LOS ANGELES—Pacific Coast Transfer & Storage Co., 748 Amethyst Street. Organized to do a storage warehouse and van service. J. F. Mays heads the company.

Connecticut

New Haven—Frank X. Hald, Inc. Storage warehouse and moving service. Capital, \$50,000. Incorporators, F. X. Hald, L. A. Hald, W. A. Hald and P. Hald, all of 276 Dwight Street.

Illinois

Chicago—Chicago Lawn Pure Ice Co., 59th Street and Grand Trunk Railroad. Cold storage warehouse and ice plant. Capital, \$75,000. Incorporators, C. A. Volland and H. C. Koelleke.

Chicago—Cubs Park Storage Co. Storage warehouse and express. Nominal capital, \$1,000. Company will operate with offices at 3539 No. Clark Street.

Kentucky

Elizabethtown—Tabb-Fryrear Transit Co. Express and freight transfer. Capital not stated. Incorporators, H. E. Tabb and George Fryrear.

Massachusetts

Fall River—Shellmound Warehouse Co. Storage warehouse and transfer. Capital, 5,000 shares of no par value stock. Incorporators, John G. Ross, treasurer, 50 Federal Street, Boston, and James T. Mountz and Oscar M. Shaw.

Michigan

Detroit—Great-Lakes-Detroit Terminal Co. Storage warehouse and freight terminal. Incorporated under Delaware laws. Capital, 20,000 shares of no par value stock and \$875,000. E. E. Seymour, Wabash and Baker Streets, is company representative.

Detroit—Manufacturers Motor Freight, Inc., 1610 W. Fort Street. Freight express and hauling service. Capital, 60 shares of no par value stock. Incorporators, Daniel S. Everson, Edward J. Snyder and Carl H. Rounds.

New Jersey

Newark—Motor Freight & Transportation Corporation. Express and hauling. Capital, \$100,000. Incorporators, Ernest A. Garland and Edgar Ross.

New York

Brooklyn—Gene-Eddies Vans, Inc. Van and trucking service. Nominal capital, \$5,000. Principal incorporator, A. B. Rosen, 51 Chambers Street, Manhattan.

Buffalo—Niagara Frontier Food Terminal. Cold storage warehouse and transfer. Capital, 100 shares of no par value stock.

New York City—Furniture Manufacturers Warehouse & Distributing Co. Organized by the Furniture Manufacturing Warehouse Co., 119 Seventh Ave-

nue, to do a furniture storage and delivery service. Capital, \$20,000.

New York City—Greenbar Warehouse Corporation. Storage warehouse. Capital, \$20,000. Incorporators include J. J. Schwartz, 15 Park Place.

New York City—Inter-Maritime Forwarding Co. Freight transfer and express service. Nominal capital, \$2,000.

New York City—Miller's Forwarding Corporation. Transfer and express. Capital, \$10,000. Principal incorporator, David Harrison, 170 Broadway.

New York City—Royal Freight Lines, Inc. Freight transfer and express service. Capital, \$20,000. Principal incorporators, H. M. Kessell, 26 Court Street, Brooklyn.

Ohio

Cincinnati—Cincinnati Motor Freight Terminals, Inc. Freight terminal warehouses and transfer. Capital, 250 shares of no par value stock. Incorporators, Elber J. Shover, 731 Huntington Bank Building, Columbus, and O. C. Weatherby and B. E. Wilkin.

Pennsylvania

Philadelphia—Apple Moving & Storage Co., 917 No. 47th Street. Cold storage warehouse and carting. Organized with Richard H. Holmes and Samuel Johnson, 928 No. 47th Street, as the heads.

Texas

Dallas—Crystalo Co., Inc. Cold storage warehouse and ice plant. Capital not stated. Principal incorporator, Wallace D. Carr, 4211 Lorraine Street.

Dallas—Wichita Ice Co. Cold storage warehouse and ice plant. Capital, \$250,000. Principal incorporator, D. M. Faulkner, 706 Hillcrest Street, Dallas.

Galveston—Bay Transfer Co. Capital, \$5,000. Incorporators, J. Collins, H. Mazantini and O. L. Riley.

Virginia

Lee Hall—Peninsular Transit Corporation. Motor freight service. Capital not stated. Principal incorporator, J. M. Dozier.

Suffolk—Caroline Storage Co. Storage warehouse and transfer. Capital, \$25,000. Principal incorporator, H. L. Land, Riverview Street.

Change in Name

Effective Jan. 1, the Compton Transfer & Storage Co. became the new name of the Independent Transfer & Storage Co., Boise, Idaho.

J. R. Compton and his family have owned and controlled the business since its organization.

New Judson Offices

The Judson Freight Forwarding Co. has opened an office at Erie Center and Hunter Streets, Baltimore, in charge of W. J. Campbell, and an office at Second and Jackson Streets, Sioux City, Iowa, with E. J. Zimmerman as manager.

Construction, Developments, Purchases, Etc.

California

FRESNO—Fresno Consumers' Ice Co. plans to spend \$25,000 extending and improving its cold storage warehouse and ice plant at Mono and P Streets.

Los Angeles—Hancock Park Warehouse Corporation is considering construction of two storage warehouses, 60 by 300 feet, each of multi-story type, at Pico Boulevard and Highland Avenue, at a cost of about \$500,000.

Oakland—Western Pacific Railroad, Great Northern Railroad and Key System, Inc., are said to be considering construction of a joint multi-story warehouse and freight terminal project, along the waterfront, to cost about \$4,000,000.

San Francisco—State Board of Harbor Commissioners has awarded a contract for a \$250,000 project to include a reinforced concrete waterfront pier, 150 by 800 feet, with warehouse and terminal facilities.

San Pedro—Crescent Wharf & Warehouse Co. has been granted a permit to erect a \$45,000 warehouse at 111 Seaside Avenue.

Canada

Ottawa, Ont.—Dominion Government has authorized an appropriation of \$1,500,000 for extending and improving the Windmill Point wharf, including warehousing and distributing facilities.

Florida

Ocala—Florida Motor Lines has secured permission to operate a motor freight line between Ocala and Daytona Beach.

Illinois

Chicago—United States Warehouse Co. has filed notice, under Delaware laws, of increase in capital from 1,000 to 11,000 shares of no par value stock.

Louisiana

New Orleans—Department of Docks is considering construction of four or five large storage warehouses, in connection with waterfront slips, with facilities for handling ocean vessels, each unit estimated to cost \$1,000,000.

New Orleans—Louisiana & Arkansas Railroad has approved plans for a \$2,500,000 warehouse and freight terminal project along the waterfront.

Maryland

Baltimore—Atlas Pier & Terminal Co., recently organized by W. G. Norman Rukert to operate a trucking and transfer service, plans to erect a terminal warehouse on the waterfront.

Baltimore—Canton Co. of Baltimore has approved plans for a \$500,000 project to include a steel pier 900 feet long, to be known as Pier 10, and warehouse and freight buildings.

Minnesota

St. Paul—Chicago, Milwaukee, St. Paul & Pacific Railroad Co. will erect a \$75,000 1-story and 2-story warehouse and

(Concluded on page 62)

"International Truck is a Brute for Punishment," Says Red Ball Transit Company, Indianapolis



At Left: International Model A-5 Speed Truck, of which Mr. Robt. L. Hiner says, "It has given excellent service and is really a brute for punishment in our work, especially in the mountains"

Follow the Lead of the LEADERS

DURING the past 25 years International Harvester has been quietly laying the groundwork for its present solid leadership of the haulage field. An outstanding service organization has been developed consisting of 182 company-owned branches in the United States and Canada . . . to match an outstanding line of trucks. A reputation has been built up which we value above all other things.

This combination has put International Trucks into the fleets of America's best-known organizations. Today, Internationals roll along the roads and streets from one corner of the country to the other, and the names on their panels reflect the keenest business judgment in the land.

Back of the purchase of these trucks are weeks of investigation and research, for these users buy their trucks strictly on the basis of what they will do and how cheaply they will do it.

Not every man knows trucks as these organizations know them; yet any truck buyer may select trucks with equal assurance of satisfaction by following the lead of the leaders. Ask the nearby Company-owned branch for a list of owners in your community. You will find it an excellent recommendation for the excellent trucks in the International line.

International Trucks are available in capacities up to 5 tons. There are also McCormick-Deering Industrial Tractors and Power Units in two sizes.

INTERNATIONAL HARVESTER COMPANY

606 So. Michigan Ave.
(Incorporated)

Chicago, Ill.

INTERNATIONAL TRUCKS

WHEN WRITING ADVERTISERS MENTION DISTRIBUTION AND WAREHOUSING

**Construction,
Developments,
Purchases, Etc.**

(Concluded from page 60)

freight building, 75 by 300 feet, on Prior Avenue.

Mississippi

Hazlehurst—Morris Ice Co. is considering construction of a \$30,000 1-story cold storage warehouse and ice plant.

Montana

Great Falls—Chicago, Milwaukee, St. Paul & Pacific Railroad Co. has approved plans for a \$25,000 warehouse and freight building on So. Second Street.

New Jersey

Garfield—Garfield Crystal Ice Co. is planning construction of a \$65,000 2-story cold storage warehouse and ice plant at Charles Street and Midland Avenue.

New York

Brooklyn—Supreme Coal & Ice Co. has plans under way for a \$70,000 cold storage warehouse and ice plant at Marcy and Lexington Avenues.

Long Island City—Buckeye Trucking Co. has leased the building at 237 Hancock Street for storage and distributing.

New York City—Harris Warehouses, Inc., has filed plans for a 1-story building, to be used for garage service, at 269-271 Cherry Street, extending through to 524-526 Water Street.

Ohio

Dayton—Dayton Union Railway Co. is planning to build a \$150,000 1-story and 2-story warehouse and express building at Union Depot site.

St. Bernard—Baltimore & Ohio Railroad has filed plans for a \$20,000 warehouse and freight building.

Oregon

Salem—Farmer's Transfer Co. is considering rebuilding its storage warehouse recently wrecked by fire with an estimated loss of \$50,000.

South Carolina

Manning—Citizens' Warehouse is planning rebuilding that portion of its plant recently wrecked by fire with an estimated loss of \$15,000.

Tennessee

Nashville—Holland Transfer Co. has arranged for change of name to the Fayetteville Transfer Co. and will operate a motor freight line from Nashville to the Alabama State line by way of Columbia and Fayetteville.

Texas

Dublin—Burke & Son Transfer & Storage Co. has secured permission to operate a motor freight line from Comanche to San Saba by way of Goldthwaite.

Fort Worth—Johnson Storage & Distributing Co. has secured permission to operate a motor freight line to the Oklahoma State line by way of Gainesville.

Nacogdoches—Red Ball Motor Freight Lines, Inc., has secured permission to

operate a motor freight line to Henderson by way of Mount Enterprise.

Virginia

Portsmouth—H. B. Rogers, Inc., has arranged with the Southgate Terminal Co. for construction of an initial group of three 1-story warehouse units to cost

more than \$50,000. The entire project is understood to involve nearly forty warehouses along both sides of the James River.

Washington

Sumner—Northern Pacific Railroad Co. has approved plans for a \$25,000 1-story warehouse, 80 by 220 feet.



PATRONS ARE REQUESTED TO FAVOR THE COMPANY BY CRITICISM AND SUGGESTION CONCERNING ITS SERVICE

12018

CLASS OF SERVICE

This is a full-rate Telegram or Cablegram unless its deferred character is indicated by a suitable sign above or preceding the address.

**WESTERN
UNION**

NEWCOMB CARLTON, PRESIDENT

J. C. WILFELDER, FIRST VICE-PRESIDENT

The filing time as shown in the date line on full-rate telegrams and day letters, and the time of receipt at destination as shown on all messages, is STANDARD TIME.

Received at 1440 Broadway, New York

ALWAYS
OPEN

DEC 24 PM 1 43

NBR134 37 DL=SAVANNAH GA 24 1215P

KENT B STILES, VP=

DISTRIBUTION & WAREHOUSING PUBLICATIONS INC

243/249 WEST 39 ST=

TO YOU AND TO ALL YOUR OFFICE FORCE WE SEND HEARTY

GREETINGS FOR A MERRY CHRISTMAS AND A HAPPY NEW YEAR THANK

THEM IN OUR NAME FOR THE GOOD WORK THEY HAVE DONE DURING

THE PAST YEAR=

SAVANNAH BONDED WAREHOUSE & TRANSFER CO.

WESTERN UNION GIFT ORDERS ARE APPROPRIATE GIFTS FOR ALL OCCASIONS.



THE NEW GRAMM TWO TON \$1095 (131"- 4-Cyl. Chassis) A "HISTORY MAKER" FOR 1931



Offered in 131-157" W. B. Also available in 180" Wheelbase, especially suitable for Van purposes.

(Under Average Conditions)

B. A. Gramm has never been a price builder. This new Two Ton—a revelation as to units, quality, equipment and price has only been made possible by the recent splendid achievements of this country's unit manufacturers and the exceptional work of the Gramm Engineering Staff.

A chassis with real power—speed—heavy $\frac{1}{4}$ " frame—Timken axles—metal wheels with heavy balloon tires—chrome vanadium spring with helper springs—Gramm front spring shackling—"LOCKHEED" Hydraulic four wheel brakes with separate emergency Tru-Stop ventilated disc—four speed transmission—

131" 4 cyl. \$1095—157" 4 cyl. \$1145—131" 6 cyl. \$1295—157" 6 cyl. \$1345—180" also available

Houdaille Hydraulic front shock absorbers—full chromium plated radiator, head lights, fender lights, hood doors and heavy front spring bumper—Ross steering and—GRAMM DESIGN.

This announcement for the first time puts a completely equipped heavy duty two ton in the low price field. Dealers will wish to take advantage of this and Gramm invites their consideration and inquiries. Several splendid territories are available. Larger Gramms to meet all needs are available.

GRAMM MOTORS, Inc.

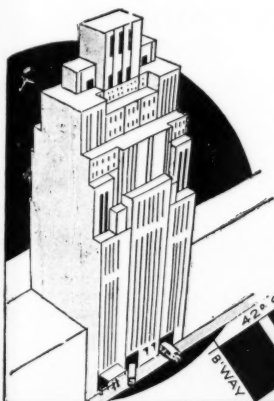
Builders of Fine Motor Trucks, Vans, Buses, and Specialized Chassis for Fire Apparatus.

DELPHOS, OHIO, U. S. A.

Hotel Dixie

42^d—43^d Streets West of Broadway

A New and Better Hotel for Times Square



Not alone new in construction and equipment, but new in conception of service and comfort to its guests. Directed by S. Gregory Taylor, who has made such enviable successes of the Hotels Montclair and Buckingham.

Single Rooms

with tub and shower

\$3, \$4 and \$5

Double Rooms

with tub and shower

\$4, \$5 and \$6

A few terraced rooms and suites, exceptionally large closets, on an attractive monthly basis.

RADIO IN EVERY ROOM

Entrances on 42nd and 43rd Sts.

CENTRAL UNION BUS TERMINAL

LOCATED IN THE DIXIE HOTEL BUS CONNECTIONS FOR ALL POINTS IN THE UNITED STATES

FLETCHER - THOMPSON INCORPORATED

Bridgeport, Conn. · Newark, N. J.

Associates

SAMUEL M. GREEN COMPANY
SPRINGFIELD, MASS.

CHAS. H. MOORES COMPANY
INCORPORATED

SUCCESSORS TO

MOORES & DUNFORD, INC.
110 E 42nd ST., NEW YORK, N. Y.



ENGINEERS

ARCHITECTS

FOR WAREHOUSES

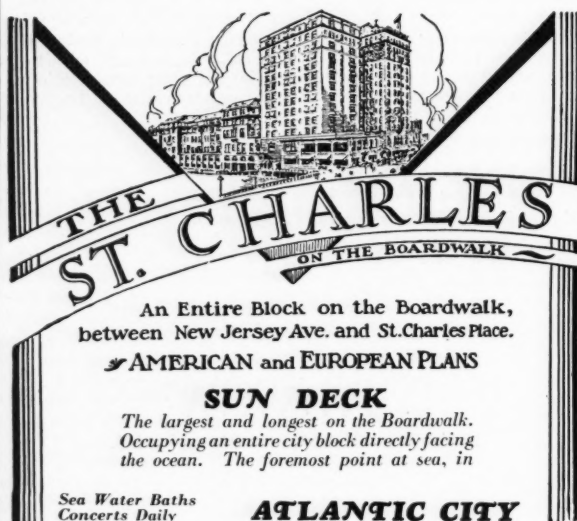
LEWIS & LEONARD

ARCHITECTS & ENGINEERS

51 EAST 42nd ST., NEW YORK CITY

KINGSLEY SERVICE INC. WAREHOUSE ARCHITECTS

103 E. 125TH ST
NEW YORK N. Y.



THE ST. CHARLES
ON THE BOARDWALK

An Entire Block on the Boardwalk,
between New Jersey Ave. and St. Charles Place.

AMERICAN and EUROPEAN PLANS

SUN DECK
The largest and longest on the Boardwalk.
Occupying an entire city block directly facing
the ocean. The foremost point at sea, in

Sea Water Baths
Concerts Daily

ATLANTIC CITY



ON THE OCEAN FRONT
The
Breakers
ATLANTIC CITY N.J.
HILLMAN MANAGEMENT

Extraordinary Reduction in Rates

AS LOW AS
Without Meals
**\$2.50 Daily per
Person**
**\$35.00 Weekly
for 2**
With Meals
**\$6.00 Daily per
Person**
**\$70.00 Weekly
for 2**

American or European Plan
Hot and Cold Sea Water
in All Baths
Complete Garage Facilities

Simplified Rate Manual FOR

Merchandise Warehousemen

AUTHOR, D. W. TACKETT
Merchants Fireproof Storage Co., Dallas

Compiled and Published by the
TEXAS WAREHOUSE AND TRANSFERMEN'S
ASSOCIATION, Inc.

A scientific rate structure of 110 pages, based on the average experience as to floor load, stacking and pile height and weight per square foot of merchandise warehouses throughout the country.

A simplified Rate Manual which takes the guess out of quotations for package storage, handling and drayage.

Contains Basis of Rate Structure and an Analysis of Revenues received for handling or draying the average 10,000 pound lot of merchandise.

Contains conversion tables, so as to discount the Tariff 10% or 20% and also for increasing the Tariff 10% or 20%.

Bound in limp leather, convenient pocket size. A durable booklet for everyday service and for usage on your Rate Desk.

Merchandise warehousemen using this Tariff will find it indispensable in quotation of rates on package storage, handling and drayage.

Price per copy, \$3.00. Lots of ten or more, per copy, \$2.75. Limited supply.

Order From

DISTRIBUTION & WAREHOUSING
249 W. 39th St. New York City

CHARLES H. KAHRS
Formerly Vice President
of Moores & Dunford, Inc.

EPPLE & KAHRS Architects & Engineers

Announce the Removal of Their Offices to
15 Washington St., Newark, N. J.

EDWARD C. EPPLE
Industrial Building
Specialist for 25 Years

WHERE TO BUY

Every warehouseman is interested in the new products offered for use in his business and warehousemen may look to this department to bring before them all things that are made for special or general use in the industry.

The manufacturers of every product contained in this department are making a direct and honest appeal to you



for your attention. We, the publishers, recommend them and what they make to you.

We would appreciate your remembering to mention DISTRIBUTION AND WAREHOUSING in writing to them because it is through this co-operation that we can better serve you individually and the industry at large.

ALARMS, FIRE

Aero Alarm Co., Inc.; 56-58 West 45th St., New York, N. Y.
American District Telegraph Co.; 155 Sixth Ave., New York, N. Y.
Ludlow Automatic Fire Alarm Co.; 128 E. Sixth St., Cincinnati, Ohio.

BASKETS, WAREHOUSE (See Boxes, Moving)

BODIES, VAN

Albert, John; 116-122 Sixth Ave., Long Island City, N. Y.
American Car & Foundry Co.; 30 Church St., New York, N. Y.
Bender Body Company; 6409 Barton, Cleveland, Ohio.
Barch Body Co.; Rockford, Mich.



N.F.W.A. Members' Operating Gerstelslager Vans:

Black Transfer & Storage Company, El Dorado, Ark.
O. K. Transfer and Storage Company, Ft. Smith, Ark.
T. G. Buckley Company, Boston, Mass.
Ben A. Langan Fireproof Storage Co., St. Louis, Mo.
Ford Bros. Van & Storage Co., Omaha, Nebraska.
Cutter Warehouses, Inc., Akron, Ohio.
Neal Fireproof Storage Company, Cleveland, Ohio.
The Edwards Transfer Company, Columbus, Ohio.
The Kutchbaugh-McNally Company, Columbus, Ohio.
D. Stelzer & Son Truck & Storage Co., Lima, Ohio.
The Pioneer Storage Co., Mansfield, Ohio.
Merchants Transfer Co., Marion, Ohio.
Wagner Fireproof Storage & Truck Co., Springfield, O.
Z. L. Travis Transfer, Steubenville, Ohio.
Depenthal Truck & Storage Co., Toledo, Ohio.
Burbank-Barbe Cartage Co., Warren, Ohio.
The Red Ball, Inc., Oklahoma City, Okla.
Keystone Delivery Transfer & Storage, Oil City, Pa.
Atlas Storage Warehouse Co., Philadelphia, Pa.
Murdoch Transfer & Storage Co., Pittsburgh, Pa.
Ed. Werner, Pittsburgh, Pa.
Shanahan Transfer & Storage Co., Pittsburgh, Pa.
White Transfer & Storage Co., Pittsburgh, Pa.
F. E. Kerr Co., Sharon, Pa.
Keystone Transfer Co., Uniontown, Pa.
Knoxville Fireproof Storage Co., Knoxville, Tenn.
Rowe Transfer & Storage Co., Knoxville, Tenn.
E. M. Bond Storage Co., Nashville, Tenn.
Westheller Warehouse Co., Inc., Houston, Texas.
Ricks Storage & Distributing Co., Jackson, Miss.
Nelson Transfer & Storage Co., Inc., Charleston, W. Va.
J. E. Miller Transfer & Storage Co., Wheeling, W. Va.

Body Built by THE GERSTELSLAGER COMPANY WOOSTER OHIO

We Are the Largest Exclusive Van Body Builders in the United States Pioneer Builders of Aluminum Vans

PLYMETL Van Bodies

Attractive—Lasting—Economical—
Strong—Safe



Trailer built by Fruehauf Trailer Co., Detroit, Mich.

HASKELITE MANUFACTURING CORPORATION
120 So. LaSalle Street
Chicago
D&W 2-Gray

Caley & Nash, Inc.; 1828 East Ave., Rochester, N. Y.
Clayson-Lorenz Co.; 4048 West Chicago Ave., Chicago, Ill.
Cook Wagon Wks., Inc., A. E.; 77 E. North St., Buffalo, N. Y.
Delphi Wagon Wks.; 313-25 So. Washington St., Delphi, Indiana.
De Rosa Co., Inc., Frank; Fowler, Van Nest and Bogart Aves., New York, N. Y.
Ever-Ready Van Body Corp.; 1429 Metropolitan Ave., Brooklyn, N. Y.
Fitzgibbon & Orlan, Inc.; Trenton, N. J.
Gerstelslager Co.; Wooster, Ohio.
Guendelhoefer Wagon Co., John; 202 Kentucky Ave., Indianapolis, Ind.
Haskelite Mfg. Corp.; D. & W. 2-Gray, 120 So. La Salle St., Chicago, Ill.
Hulet Top & Body Co.; 576 Garfield, Detroit, Mich.
Lyons & Co., Hugh; Lansing, Mich.
Maday, M.; 1756 Genesee St., Buffalo, N. Y.
Martin Steel Products Co.; Mansfield, Ohio.
Met-L-Wood Corp.; 6752 W. 65th St., Chicago, Ill.
Metzler & Sons Co., J.; 158-184 E. Grand Ave., Chicago, Ill.
Millsbaugh & Irish Corp.; 1450 E. 19th St., Indianapolis, Ind.
Monday, A. J.; 321 Fourth, Milwaukee, Wis.
Niagara Body Company; Buffalo, N. Y.

Built of MET-L-WOOD

BODY PANNELLING by City Commercial Body Bldrs., Long Island City, N. Y.

The strength of steel and lightness of wood combined. Decreases body weight. Increases capacity for pay load and outwears other panels. Write for samples and booklet.



MET-L-WOOD CORP. 6752 W. 65th St., Chicago, Ill.

WHEN WRITING ADVERTISERS MENTION DISTRIBUTION AND WAREHOUSING

BODIES, VAN (Continued)

Proctor-Keefe Company; 7741 Dix Ave., Detroit, Mich.
 Removable Steel Bodies Co., Inc.; 386 Leonard St., Brooklyn, N. Y.
 Schaefer Wagon Co., Gustav; 4168 Lorain Ave., Cleveland, Ohio.
 Scholl & Son, Anton; 380 Flushing Ave., Brooklyn, N. Y.
 Shaver Carriage & Auto Co.; Des Moines, Iowa.
 Shop of Siebert; 614-16-18 Southard Ave., Toledo, Ohio.
 Tackens Bros.; 1015 Harrison St., Flint, Mich.
 Whitfield & Sons, Penn Yan, N. Y.
 Wiedman Body Co., Geo.; North Tonawanda, N. Y.
 Woebler Car & Mfg. Co.; 1346 Eleventh St., Denver, Colo.

BOXES, MOVING

Acme Basket Mfg. Co.; 418 No. Franklin St., Baltimore, Md.
 Anderson Box & Basket Co.; Audubon District, Henderson, Ky.
 Backus, Jr., & Son, A.; Dept. 5, 1540 Lafayette Blvd., Detroit, Mich.
 Ballou & Son, M. E.; 30 River St., Becket, Mass.
 Bryant, John T.; Springfield, Ohio.
 Day Basket Works, E. T. B.; Northeast, Md.
 Diamond State Fibre Co.; East Bridgeport, Pa.
 Eastern States Package Co., Inc.; Penn Yan, N. Y.
 Iden Co., Wm. A.; 564 Washington Blvd., Chicago, Ill.
 (See advertisement elsewhere in this issue.)
 Lewis Co., G. B.; Watertown, Wis.
 Miami Mfg. Co.; Peru, Ind.
 National Vulcanized Fibre Co.; East Wilmington, Del.
 Philadelphia Paper Mfg. Co.; Nixon & Fountain Sts., Philadelphia, Pa.
 Portland Basket & Handle Co.; 1321 Macadam St., Portland, Ore.

BOX STRAPPING (MACHINES AND SUPPLIES)

Acme Steel Goods Co.; 2836 Archer Ave., Chicago, Ill.
 American Casting & Mfg. Corp.; 30 Main St., Brooklyn, N. Y.
 American Steel & Wire Co.; Rockefeller Bldg., Cleveland, Ohio.
 Cary Mfg. Co.; Manhattan Bridge Plaza, Brooklyn, N. Y.
 Gerrard Co., Inc.; 1948 S. 52nd St., Chicago, Ill.
 Griplock, Inc.; 19 West 44th St., New York City.
 Harvey Spring & Forging Co.; Racine, Wis.
 Robertson Steel & Iron Co., W. F.; Elm & Second Sts., Cincinnati, Ohio.
 Signode Steel Strapping Co.; 2600-2620 N. Western Ave., Chicago, Ill.
 Stanley Works; Grove Hill & Lake St., New Britain, Conn.
 Wire & Steel Products Co.; Van Brunt & Seabring Sts., Brooklyn, N. Y.

BRINE

Solvay Sales Corp.; 40 Rector St., New York, N. Y.

CANOPIES

General Mill Equipment Co.; 2021 Penn Ave., Kansas City, Mo.

**"CANOPY-DRY"**
No Delay—No Damage
No Danger

Can be quickly attached to freight car door in a few minutes, and permit loading or unloading of cars in any weather. Money cheerfully returned if the canopy is not satisfactory. Send for trial order of one.

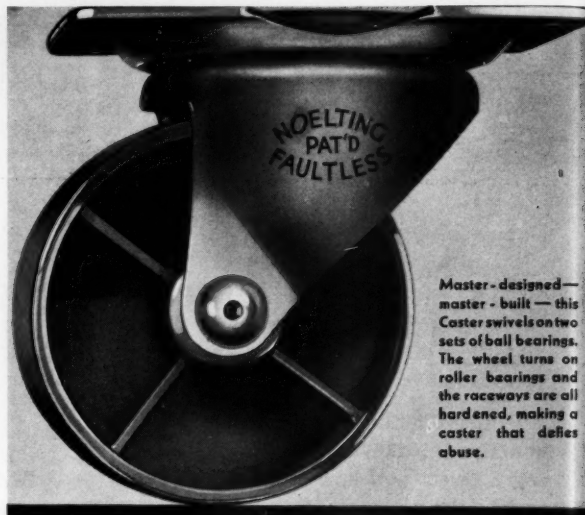
Manufactured only by
GENERAL MILL EQUIPMENT CO.
 2021 Penn Ave., Kansas City, Mo.

CARPET CLEANING EQUIPMENT

Chief Mfg. Co.; 806 Beecher St., Indianapolis, Ind. (Besters, stationary)
 Kent Co., Inc.; 542 Dominick St., Rome, N. Y. (Shampooing equipment)
 United Vacuum Appliance Corp.; Dept. I-1, Twelfth St. and Columbia Ave., Connorsville, Ind. (Besters)

CASES, SHIPPING

Backus, Jr., & Sons, A.; Dept. 5, 1540 Lafayette Blvd., Detroit, Mich.
 Bird & Son, Inc.; Mill St., E. Walpole, Mass.
 General Box Co.; 500 No. Dearborn St., Chicago, Ill.
 Hummel & Downing; Milwaukee, Wis.
 Interstate Corrugated Box Co., Inc.; Front, Main, Water & Washington Sts., Brooklyn, N. Y. (Corrugated)
 King Shipping Case Corp.; 376 W. Water St., Syracuse, N. Y.
 Lewis Co., G. B.; Watertown, Wis.
 Wisconsin Box Co.; Wausau, Wis.



Master-designed—master-built—this Caster swivels on two sets of ball bearings. The wheel turns on roller bearings and the raceways are all hardened, making a caster that defies abuse.

FROM THE FLOOR LINE UP...THEY'RE FAULTLESS

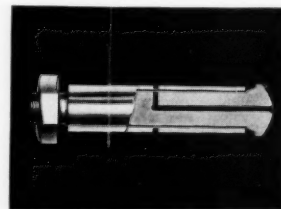
If it is heavy duty you are interested in—casters that carry your heaviest burdens over rough, uneven floors, swiftly, easily—casters that stand up under the roughest abuse—be sure your trucks are equipped with Faultless. Faultless Truck Casters are built by one of America's pioneer manufacturers. They have been giving service for almost fifty years. It will pay you to investigate the money Faultless Casters will save your plant.

FAULTLESS CASTER COMPANY
EVANSVILLE, INDIANA

New York Chicago Grand Rapids
 Los Angeles High Point
 Canadian Factory, Stratford, Ontario



The New Faultless Truck Caster Catalog contains valuable information to anyone interested in material handling in plants. Send for a copy today.



With this new method of lubrication, grease applied with a Zerk Gun passes through the center of the bolt and lubricates the entire axle. It is now easy to keep your casters in perfect working condition.

NOELTING FAULTLESS • CASTERS

Makers of Quality Casters for a Third of a Century

WHEN WRITING ADVERTISERS MENTION DISTRIBUTION AND WAREHOUSING

CASTERS, TRUCK

Adams Co.; Dubuque, Iowa.
American Caster Co.; 330 Washington St., Hamilton, Ohio.
American Foundry & Mfg. Co.; 11th & Hebert Sts., St. Louis, Mo.
Bond Foundry & Mfg. Co.; Mannheim, Lancaster County, Pa.
Buffalo Pulley & Caster Co., Inc.; 175 Breckenridge St., Buffalo, N. Y.
Clark Co., George P.; 4 Canal St., Windsor Locks, Conn.
Celson Co.; Elyria, Ohio.
Divine Bros. Co.; 8 Hotel St., Utica, N. Y.
Fairbanks Co.; Exec. Off., 393-399 Lafayette St., New York, N. Y.

(See advertisement elsewhere in this issue.)

Faultless Caster Co.; 1521 No. Garvin St., Evansville, Ind.

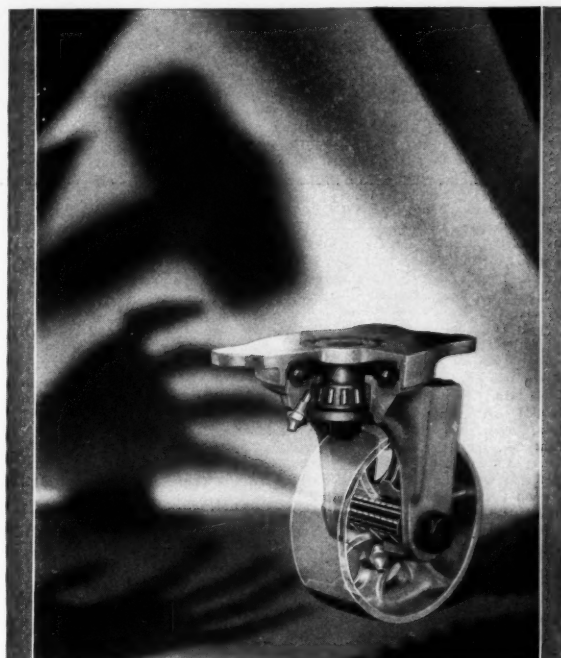
(See advertisement elsewhere in this issue.)

Fleming Co., F. A.; 9703 Baltic Rd., Cleveland, Ohio.
Globe Vise & Truck Co.; 1451 Front St., N. W., Grand Rapids, Mich.
Greenan Mfg. Co.; 1280 17th St., Detroit, Mich.
Hamilton Caster & Mfg. Co.; Hamilton, Ohio.
Hyatt Roller Bearing Co.; Newark, N. J.
Jarvis & Jarvis; 200 So. Main St., Palmer, Mass.
Keystone Forging Co.; Northumberland, Pa.
Koenig & Co., Edward L.; 569½ West Lake St., Chicago, Ill.
Lansing Co.; 602 Cedar St., Lansing, Mich.
Lyon Iron Works, Inc.; Box A, Greene, N. Y.
Market Forge Co.; Garney St., Everett, Mass.
Menasha Wood Split Pulley Co.; Menasha, Wis.
Mullins Body Corp.; 1017 Mill St., Salem, Ohio.
New Britain Mfg. Co.; 140 Chestnut St., New Britain, Conn.
Nice Ball Bearing Co.; 2925 Hunting Park Ave., Nicetown, Philadelphia Pa.
Nutting Truck Co.; 202 W. Kinzie St., Chicago, Ill.

(See advertisement elsewhere in this issue.)

Payson Mfg. Co.; 2920 W. Jackson Blvd., Chicago, Ill.
Phoenix Caster Co.; South State St., Indianapolis, Ind.
Saginaw Stamping & Tool Co.; Saginaw, Mich.
Service Caster & Truck Co.; 517 N. Albion St., Albion, Mich.
Tucker & Dorsey Mfg. Co.; Dept. D.W., S. State & Bates Sts., Indianapolis, Ind.
Wolverine Caster Co.; Traverse City, Mich.
Zering Mfg. Co., H.; Div. of Hamilton Caster & Mfg. Co., Brownway and Railroad Sts., Oakley, Cincinnati, Ohio.

(See advertisement elsewhere in this issue.)



No. 6065TH Service Caster—Hyatt Bearings—Timken Bearings—Service Ball bearings rolling in steel raceways—Alemite Lubrication

CEMENT

Little Bear Specialties Co., Inc.; 1509 Campbell St., Kansas City, Mo.



REPAIR YOUR OWN
TARPAULINS WITH
Little Bear Liquid
Fabric Cement

Write for Free Sample

Saves 50% in Maintenance

Little Bear has been standard with the Tent and Awning Manufacturers since 1923. Used by the War Department for the repair of tentage and Paulins.

Little Bear is a ONE COAT cement that makes a lasting waterproof repair in 40 minutes and the repair will outlast the rest of the Paulin.

Manufactured and Distributed by

LITTLE BEAR SPECIALTIES CO., INC.
1509 CAMPBELL STREET KANSAS CITY, MO.

CLOCKS, TIME AND WATCHMAN'S

American District Telegraph Co.; 155 Sixth Ave., New York, N. Y.
American Watchmen's Clock Co.; 150 Nassau St., New York, N. Y.
American Watchmen's Time Detector Co.; Room 1144, Woolworth Bldg., New York, N. Y.

Automatic Time Stamp Co.; 164 Congress St., Boston, Mass.
Bundy Recording Co., W. H.; Dept. C, 72 Cortlandt St., New York, N. Y.
Cincinnati Time Recorder Co.; 1733 Central Ave., Cincinnati, Ohio.
Detex Watch Clock Corp.; 4147 E. Ravenswood Ave., Chicago, Ill.
Gisholt Machine Co.; Madison, Wis.
Howard Clock Co., E.; 210 Eustis St., Boston, Mass.
Imhauser Co., E.; 212 Broadway, New York, N. Y.
International Business Machines Corp.; 50 Broad St., New York, N. Y.
Monitor Time Clock Co.; Syracuse, N. Y.
Pacific Elec. Clock Co.; 86 Third St., San Francisco, Cal.
Silberberg, Mortimer J.; 116 S. Michigan Ave., Chicago, Ill.
Simplex Time Recorder Co.; Lincoln Blvd., Gardner, Mass.
Standard Register Co.; 107 Campbell St., Dayton, Ohio.
Stromberg Elec. Co.; 223 W. Erie St., Chicago, Ill.
Thompson Time Stamp Co., Inc.; 240 W. 23rd St., New York, N. Y.
Time Register Repair & Supply Co.; Canastota, N. Y.
Warren Clock Co.; Homer Ave., Ashland, Mass.

WHEN WRITING ADVERTISERS MENTION DISTRIBUTION AND WAREHOUSING

IMMUNE

to the Deadly
Drag of Friction . . .

Friction, the universal and constant foe of Industrial Hauling, lays its hand secretly on trucking equipment, portable machines, and racks. A spell of sleeping sickness falls. Depreciation trebles its pace as the truck slows wearily. Waste in time and human energy mounts, unsuspected.

Crusaders against Friction and all its wastes designed Service Casters. The finest bearings, the best proved and tested lubrication, the clean-cut proportions demanded by highest engineering practice—these all were enlisted to dissipate lag and drag and surface resistance.

This was done for you. Equipment employing such casters as running gear was made for you. It is inevitable that Friction should already have taken its toll in your shop or plant. Now minimize that loss. Write for details of the Service equipment that will make you immune.

SERVICE CASTER & TRUCK CO.

517 N. Albion St., Albion, Michigan

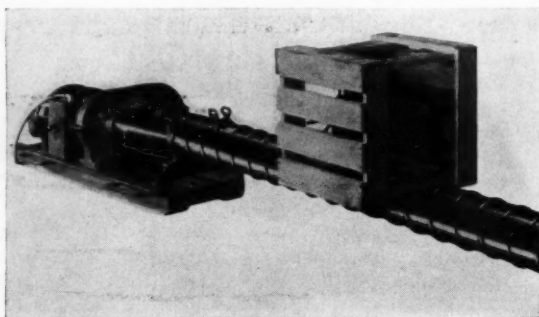
Chicago: 603 Washington Blvd. New York: 200 Lafayette St. San Francisco: 61 Bluxome St.
England: 15 Mallow St., Old St., London Canada: Brock & Campbell Sts., Brantford, Ont.

Service

CASTERS & TRUCKS

CONVEYORS

Allis-Chalmers Mfg. Co.; Milwaukee, Wis.
 Alvey-Ferguson Co.; 75 Bisney Ave., Cincinnati, Ohio. (Gravity)
 Alvey Machy. Co.; 3200 So. Broadway, St. Louis, Mo. (Portable, Power and Gravity.)
 Bailey Burruss Co.; Atlanta, Ga.
 Bartlett Co., Hayward; Scott & McHenry Sts., Baltimore, Md.
 Bartlett & Snow Co., C. O.; 6218 Harvard Ave., Cleveland, Ohio.
 Bodinson Mfg. Co.; 4401 San Bruno Ave., San Francisco, Cal. (Portable and Gravity.)
 Brown Hoisting Mch. Co.; 4403 St. Clair St., N. E., Cleveland, Ohio.
 Caldwell & Son, H. W.; 17th & Western Ave., Chicago, Ill.
 Chain Belt Co.; 736 Park St., Milwaukee, Wis.
 Chicago Automatic Conveyor Co.; 55th Ave. & 19th St., Cicero, Ill.
Clark Trutractor Co.; Battle Creek, Mich.
 Dodge Mfg. Corp.; Mishawaka, Ind.
 Freeman-Riff Co.; Terre Haute, Ind.
 General Conveyor & Mfg. Co.; 3601 Salena St., St. Louis, Mo. (Gravity and Power.)
 Gifford-Wood Co.; 60 Second Hill, Hudson, N. Y. (Portable.)
 Griffin Lumber Co.; Hudson Falls, N. Y. (Gravity.)
 Halse Mfg. Co., Geo.; 144th St. & Park Ave., New York, N. Y. (Portable.)
 Haslett Chute & Conveyor Co.; Oaks, Pa. (Gravity.)
 Howe Chain Co.; 2-30 East Clay Ave., Muskegon, Mich.
 Hunt Co., Inc., C. W.; Brighton, Staten Island, N. Y. (Gravity.)
 Jeffrey Mfg. Co.; 989 No. 4th St., Columbus, Ohio.
 Kiefer Machine Co., Karl; 919 Martin St., Cincinnati, Ohio. (Gravity.)
 Lamson Co.; Syracuse, N. Y. (Portable and Gravity.)
 Link-Belt Co.; 300 W. Pershing Rd., Chicago, Ill. (Portable and Gravity.)
 Logan Co.; 201 N. Buchanan St., Louisville, Ky. (Portable, Power and Gravity.)
 Loudon Mch. Co.; 1116 Broadway, Fairfield, Iowa.
 McKinney-Harrington Conveyor Co.; North Chicago, Ill. (Portable.)
 Meyer Mfg. Co., Geo. J.; 576 Clinton St., Milwaukee, Wis. (Gravity.)
 Montgomery Elevator Co.; Moline, Ill.
 Ogden Iron Works; Ogden, Utah.
 Otis Elevator Co.; 26th St. & 11th Ave., New York, N. Y. (Gravity.)
 Portable Machinery Co.; 17 Lakeview Ave., Clifton, N. J. (Portable.)
 Proctor & Schwartz, Inc.; 700 Tabor Rd., Philadelphia, Pa.
 Richards-Wilcox Mfg. Co.; 316 W. Third St., Aurora, Ill.
 Russel Wheel & Foundry Co.; Detroit, Mich.
 Standard Conveyor Co.; Dept. 12, 315 Second Ave., N. W., North St. Paul, Minn. (Portable, Power and Gravity.)
 Stearns Conveyor Co.; E. 200th St. & St. Clair Ave., Cleveland, Ohio.
 Webster Mfg. Co.; 1856 No. Kostner Ave., Chicago, Ill. (Gravity and Portable.)



Crated loads "TwinVeyed" swiftly, economically.
 Our engineers will suggest crate or pallet design
 for any commodity.

"Twin Vey"

—the gentle art of
 quick conveying



Clark "TwinVeyor" consists of parallel spiral tubes turned toward each other by a power head. Flexible—takes angles up, down or to either side. Portable—made up in sections, it's easily and quickly moved about. "TwinVeying" means rapid, low-cost conveying of materials, parts and finished products in bags, bales, bundles, cartons, crates, boxes. It includes elevating and tiering. Write for new TwinVeyor Bulletin.

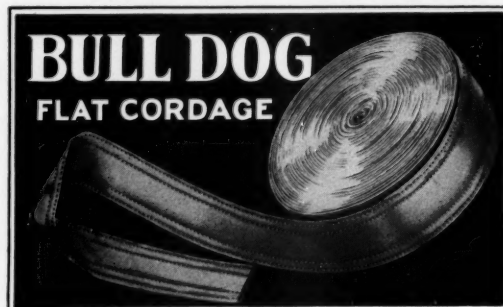
The Clark Truveyor Co.

Battle Creek, Mich.

Attach this
 ADVERTISEMENT
 to your inquiry

CORDAGE, FLAT

Clark Bros. Mfg. Co.; 34 N. Front St., Philadelphia, Pa.



For Securing and Protecting Furniture in Transit

Put up in 84-ft. rolls

	Width	Approx. Wt. per roll	Price per roll
No. 1 Regular	3"	3 lbs.	\$2.50
No. 2 Heavy	3"	4 1/2 lbs.	3.75

F. O. B. Philadelphia

Strong and durable.
 Ties and unties easily.

Will not burn or scratch the finish.
 Prevents damage and pays for itself.

Order a Roll Today. No. 1 is the popular size.

"Best in the Long Run"

Manufactured and distributed solely by

Clark Bros. Mfg. Co.

INCORPORATED

34 North Front St.

Philadelphia, Pa.

COVERS, AUTOMOBILE DUST

Barnett Canvas Goods & Bag Co.; 127 Arch St., Philadelphia, Pa.

COVERS, TRUCK

Astrup Co.; 2937 W. 25th St., Cleveland, Ohio.
 Atlanta Tent & Awning Co.; Atlanta, Ga.
 Baker-Lockwood Mfg. Co., Inc.; McGee Trafficway at 23rd St., Kansas City, Mo.
 Barnett Canvas Goods & Bag Co.; 127 Arch St., Philadelphia, Pa.
 Boyle & Co., Inc.; John; 122-114 Duane St., New York, N. Y.
 Breen, Wm. H.; 219-231 Rutherford Ave., Charlestown, Mass.
 Brooke Tarpaulin Co.; 429 Celeste St., New Orleans, La.
 Buckeye Tent & Awning Mfg. Co.; 264 Spruce St., Columbus, Ohio.
 Carnegie-Gouldie Mfg. Co.; 26th & Penn., Kansas City, Mo.
 Carpenter & Co., Geo. B.; 440 N. Wells St., Chicago, Ill.
 Channon Co., H.; 149 N. Market St., Chicago, Ill.
 Chicago Asbestos Table Mat Co.; 2815 Irving Park Blvd., Chicago, Ill.
 Clifton Mfg. Co.; Waco, Texas.

WATERPROOF TRUCK COVERS

"America's
 Best"—
 Standard
 Army
 Duck

All Sizes

Also manufacturers
 of Piano Hoists,
 Piano Covers, Dolly
 Trucks, Van Pads,
 Furniture Pads.

Write for prices.



WM. H. BREEN

219 RUTHERFORD AVE.

CHARLESTOWN, MASS.

WHEN WRITING ADVERTISERS MENTION DISTRIBUTION AND WAREHOUSING

COVERS, TRUCK (Continued)

Couch Bros. Mfg. Co.; Atlanta, Ga.
Dafos Eustice Co.; 4042 W. Jefferson Ave., Detroit, Mich.
Des Moines Tent & Awning Co.; 913 Walnut St., Des Moines, Iowa.
Donnelly Son & Putnam; 92 Sunswick St., Long Island City, N. Y.

(See advertisement elsewhere in this issue.)

Driver Bros., Inc.; 500 So. Green St., cor. Congress St., Chicago, Ill.
Ehrlich & Co.; Fred 192 24th St., Brooklyn, N. Y.
Fulton Bag & Cotton Mills; Atlanta, Ga.

(See advertisement elsewhere in this issue.)

Goss Co., J. C.; Woodbridge & Bates Sts., Detroit, Mich.
Heath & Son, B. F.; 225 Warren St., Newark, N. J.
Hetrick Mfg. Co.; D.W.28, Summit & Magnolia Sts., Toledo, Ohio.
Hoegge Co., Inc., Wm. H.; 138 S. Main St., Los Angeles, Cal.
Hooper & Sons Co., Wm. E.; 3502 Parkdale St., Baltimore, Md.
Humphry's Sons, R. A.; 1020 Callowhill St., Philadelphia, Pa.
Iden Co., Wm. A.; 564 Washington Blvd., Chicago, Ill.

(See advertisement elsewhere in this issue.)

Jacksonville Tent & Awning Co.; Dept. H. 231-9 E. Bay St., Jacksonville, Fla.
Landers Bros. Co.; 837 Buckingham St., Toledo, Ohio.
Malls Supply Co.; 421 Arch St., Philadelphia, Pa.
Michigan Tent & Awning Co.; 1922 W. Canfield Ave., Detroit, Mich.

(See advertisement elsewhere in this issue.)

New York Drop Cloth Co.; 150 Greene St., New York, N. Y.
Pittsburgh Waterproof Co.; 435 Liberty Ave., Pittsburgh, Pa.
Reach Textile Co., A. L.; 6-8 West 20th St., New York, N. Y.

(See advertisement elsewhere in this issue.)

Seattle Tent & Awning Co.; First Ave. & Columbia St., Seattle, Wash.
Smith Co., Arthur P.; 139 Spring St., New York, N. Y.
Snellerson Bros., Inc.; 59-65 Washington St., No., Boston, Mass.
Swanfeldt; 501 N. Figueroa Blvd., Los Angeles, Cal.
U. S. Tent & Awning Co.; 7107 N. Sangamon St., Chicago, Ill.
Upon-Walton Co.; 1245 W. 11th St., Cleveland, Ohio.
Valley Mills, LaGrange, Ga.
Wenzel Tent & Duck Co., Herman; 1030 Paul St., St. Louis, Mo.
Wheeling Tent & Awning Co.; Wheeling, W. Va.
Wyandotte Awning & Tent Co.; Kansas City, Kan.

DOORS, COLD STORAGE

Born Co., H. A.; 208 N. Wabash Ave., Chicago, Ill.
Ehrlich & Sons Mfg. Co., H.; St. Joseph, Mo.
Gillen-Cole Co.; 66 N. Front St., Portland, Ore.
Glockler-Bernard; 1027 Penn Ave., Pittsburgh, Pa.
Jamison Cold Storage Door Co.; P. O. Box 26, Hagerstown, Md.
Jones Cold Storage Door Co.; Hagerstown, Md.
Matot, Duffy A.; 1537 Montana St., Chicago, Ill.
National Refrigerator Co.; 827 Koeln Ave., St. Louis, Mo.
Schmidt Co., C.; John & Livingston Sts., Cincinnati, Ohio.
Stevens Co., Ben A.; Toledo, Ohio.
Union Fibre Co., Inc.; North End Mechanic St., Winona, Minn.
Variety Mfg. Co.; 2958 Carroll Ave., Chicago, Ill.
Ward Refrig. & Mfg. Co.; 6801 So. Alameda St., Los Angeles, Cal.
York Ice Mch. Corp.; 234 Ninth St., San Francisco, Cal.

DOORS, ELEVATOR

Art Metal Construction Co., Jamestown, N. Y.
Cincinnati Mfg. Co.; 1850 Gest St., Cincinnati, Ohio.
Cornell Iron Works, 77 Marion St., Long Island City, N. Y.
Edwards Mfg. Co.; 529 Eggleston Ave., Cincinnati, Ohio.
Firecraft Corp.; 4711 West Lake St., Chicago, Ill.
Hanke Wire & Iron Works; 800 N. Albany Ave., Chicago, Ill.
Kinnear Mfg. Co.; 1270 Fields Ave., Columbus, Ohio.
Lambert Metal Door Co.; 184 Lorain Ave., Columbus, Ohio.
Pelle Co., The; Harrison Place & Stewart Ave., Brooklyn, N. Y.
(See advertisement elsewhere in this issue.)
Richards-Wilcox Mfg. Co.; 316 W. Third St., Aurora, Ill.
Richmond Ppf. Door Co.; N. W. Fourth & Center Sts., Richmond, Ind.
St. Louis Fire Door Co.; 1140 S. Sixth St., St. Louis, Mo.
Security Fire Door Co.; 3044 Lambdin Ave., St. Louis, Mo.
Smith Wire & Iron Works, F. P.; Fullerton, Clybourne & Ashland Aves., Chicago, Ill.
Tyler Co., W. S.; 3621 Superior Ave., N. E., Cleveland, Ohio.
Warsaw Elevator Co.; 216 Fulton St., Warsaw, N. Y.
Wilson Corp., J. G.; 9 East 38th St., New York, N. Y.

DOORS, FIRE

Atlas Fireproof Door Co.; 247 Calyer St., Brooklyn, N. Y.
Bogert & Carrough Co.; Washington Ave., Paterson, N. J.
California Ppf. Door Co.; 1931 Los Angeles St., Los Angeles, Cal.

HEAVY DUTY SECO DOORS

—Meet all modern requirements for the quick and efficient handling of heavy trucking loads. Catalog sent on request.

Offices in

New York, Philadelphia, Chicago, San Francisco, Detroit and other principal cities.

Security Fire Door Co., 3044 Lambdin Ave., St. Louis, Mo.

SECURITY DOORS

Make good freight elevators more efficient



VULCAN
"ALL-STEEL"
FIRE DOORS

Universally Used
in All Modern
Fireproof
Warehouses

Approved by
Underwriters

Details and Prices
on Request.

VULCAN RAIL & CONSTRUCTION CO.
Grand St. and Garrison Ave., Maspeth, N. Y.

Cornell Iron Works; 77 Marion St., Long Island City, N. Y.
Edwards Mfg. Co.; 529 Eggleston Ave., Cincinnati, Ohio.
Firecraft Corp.; 4711 West Lake St., Chicago, Ill.
Hanke Wire & Iron Works; 800 N. Albany Ave., Chicago, Ill.
Harris-Prebble Door Co.; 228 N. LaSalle St., Chicago, Ill.
Kinnear Mfg. Co.; 1270 Fields Ave., Columbus, Ohio.
Lambert Metal Door Co.; 184 Lorain Ave., Columbus, Ohio.
Lee & Son Co., Thomas; 130 W. Second St., Cincinnati, Ohio.
Merchant & Evans Co.; Philadelphia, Pa.
Ogden Co., J. Edward; 147 Cedar St., New York, N. Y.
Pelle Co., The; Harrison Place & Stewart Ave., Brooklyn, N. Y.
(See advertisement elsewhere in this issue.)
Penn. Seaboard Steel Corp.; 1417 Sansom St., Philadelphia, Pa.
Richards-Wilcox Mfg. Co.; 316 W. Third St., Aurora, Ill.
Richmond Fireproof Door Co.; N. W. Fourth & Center Sts., Richmond, Ind.
St. Louis Fire Door Co.; 1140 S. Sixth St., St. Louis, Mo.
Security Fire Door Co.; 3044 Lambdin Ave., St. Louis, Mo.
Smith Wire & Iron Works, F. P.; Fullerton, Clybourne and Ashland Aves., Chicago, Ill.
Trucon Steel Co.; Youngstown, Ohio.
Tyler Co., W. S.; 3621 Superior Ave., N. E., Cleveland, Ohio.
Variety Mfg. Co.; 2958 Carroll Ave., Chicago, Ill.
Vulcan Rail & Con. Co.; Grand St. & Garrison Ave., Maspeth, N. Y.
Wilson Corp., J. G.; 9 E. 38th St., New York, N. Y.

ELEVATORS

Martlett & Snow Co., C. O.; 6218 Harvard Ave., Cleveland, Ohio. (Freight.)
Montgomery Elevator Co.; Moline, Ill. (Passenger and Freight.)
Otis Elevator Co.; 11th Ave. & 26th St., New York, N. Y.
Trier Co., W. S.; 3621 Superior Ave., N. E., Cleveland, Ohio. (Passenger and Freight.)
Warsaw Elevator Co.; 216 Fulton St., Warsaw, N. Y. (Passenger and Freight.)

ELEVATORS, PORTABLE

Alvey Mch. Co.; 3200 So. Broadway, St. Louis, Mo.
Barrett-Cravens Co.; 3264 W. 30th St., Chicago, Ill.
Caldwell & Son Co., H. W.; 17th & Western Ave., Chicago, Ill.
Economy Eng. Co.; 2451 W. Van Buren St., Chicago, Ill.
(See advertisement elsewhere in this issue.)
General Conveyor & Mfg. Co.; 3601 Salena St., St. Louis, Mo.
Jeffrey Mfg. Co.; 989 No. Fourth St., Columbus, Ohio.
Koenig & Co., Edward L.; 569½ W. Lake St., Chicago, Ill.
Lewis-Shepard Co.; 124 Walnut St., Watertown Sta., Boston Mass.
Revolvator Co.; 396 Garfield Ave., Jersey City, N. J.



Revolvators Portelators

HAND POWER
MOTOR POWER
COMBINATION
HAND & MOTOR

ANY HEIGHT
ANY CAPACITY

Send for Bulletin
D-W.

REVOLVATOR CO.

396 Garfield Ave.

Jersey City



Economy Lifters

Storage Racks and Trucks



All sizes, capacities and designs

Economy Engineering Company

2651 W. Van Buren Street, Chicago

342 Madison Ave., New York City

ELEVATORS, PORTABLE (Continued)

EXCELSIOR

Allen, Inc., Charles M.: Fulton, N. Y.
Little Rock Excelsior & Wrapper Mfg. Co.: Box 146, No. Little Rock, Arr.
Phillips Excelsior Co.: Chattanooga, Tenn.

EXTINGUISHERS, FIRE

Ajax Fire Engines Works: 1188-1190 Fulton St., Brooklyn, N. Y.
American-La France and Foamite Corp., 100 East La France St., Elmira, N. Y.
Automatic Fire Sprinkler Co.: 17 W. 87th St., New York, N. Y.
Barnes, Henry K.: 234 Devonshire St., Boston, Mass.
Boyer Fire Apparatus Co.: Logansport, Ind.
Bridgeport Brass Co.: East Main St., Bridgeport, Conn.
Callahan Co., C.: 297 Congress St., Boston, Mass.
Elkhart Brass Mfg. Co.: 1302 West Beardsley Ave., Elkhart, Ind.
Etsy Sprinkler Co.: Laconia, N. H.
Fyr-Fyter Co.: 1691 Fyr-Fyter Bldg., Dayton, Ohio.
Gilbert & Sons, A.: 4015 Forest Park Bldg., St. Louis, Mo.
Gorham Fire Apparatus Co.: 206 Drumm St., San Francisco, Cal.
Knight & Thomas, Inc.: 212 Summer St., Boston, Mass.
Neptune Mfg. Co.: Box No. 669, Masontown, Pa.
New Process Roofing & Sy. Co.: Dallas, Texas.
Northern Pump Co.: 920 18th Ave., N. E., Minneapolis, Minn.
Oil Conservation Eng. Co.: 877 Addison Rd., Cleveland, Ohio.
Pacific Fire Extinguisher Co.: 440 Howard St., San Francisco, Cal.
Pyrene Mfg. Co.: 560 Belmont Ave., Newark, N. J.
Robinson Fire App. Mfg. Co.: 4268 N. 20th St., St. Louis, Mo.
Safety Fire Extinguisher Co.: 299 Seventh Ave., New York, N. Y.
Severin Fire & Sy. Co.: 714-16 No. Broadway, Oklahoma City, Okla.
Simmons Co., John: 110 Centre St., New York, N. Y.
Stempel Fire Extinguisher Mfg. Co.: 20th & Ferry Sts., St. Louis, Mo.
Solvay Sales Corp.: 40 Rector St., New York, N. Y.

EXTERMINATORS, RAT OR MICE

Ratin Laboratory, Inc.: 116 Broad St., New York, N. Y.

FLOORS, RESURFACING MATERIAL

Euclid Chemical Co.: 7012 Euclid Ave., Cleveland, Ohio.
Master Builders Co.: 7016 Euclid Ave., Cleveland, Ohio
Stonhard Co.: Room 219, 800 No. Delaware Ave., Philadelphia, Pa.

FREIGHT FORWARDERS, GENERAL

Empire Freight Co. of N. Y., Inc.: 117 Liberty St., New York, N. Y.
Judson Frt. Fwdg. Co.: 140 So. Dearborn St., Chicago, Ill.
(See advertisement elsewhere in this issue.)

WHEN WRITING ADVERTISERS MENTION DISTRIBUTION AND WAREHOUSING

SPECIAL REDUCED FREIGHT RATES

With Private Through Car Loadings to Far West and Pacific Coast Points for the Accommodation of

HOUSEHOLD GOODS and AUTOMOBILES
An Efficient Service Based on Years of Knowledge and Experience

BEST FACILITIES FOR CARLOAD DISTRIBUTION

Domestic and
Foreign Shippers,
Forwarders and
Distributors



Foreign and
Domestic Lift Van
Service for House-
hold Goods

EMPIRE FREIGHT COMPANY
Incorporated

New York City, N. Y.
117 Liberty St.

Boston, Mass.
93 Huntington Ave.

CHICAGO, ILL. Philadelphia, San Francisco, LOS ANGELES, CAL.
195 W. Adams St. Oakland, Seattle, Portland 316 Commercial St.

FUMIGATING EQUIPMENT

Calcyanide Co.: 60 East 42nd St., New York, N. Y.

(See advertisement elsewhere in this issue.)

Furniture Fumigation Corp.: 100 West 101st St., New York, N. Y.

(See advertisement elsewhere in this issue.)

Haskellite Mfg. Corp.: D. & W. 2-Gray, 120 So. La Salle St., Chicago, Ill.

(See advertisement elsewhere in this issue.)

HAND TRUCKS

Aeromotor Co.: 2500 W. Roosevelt Rd., Chicago, Ill. (Stevadore, All Steel)
American Pulley Co.: 420 Wissahickon Ave., Philadelphia, Pa. (All Steel, Stevadore)

(See advertisement elsewhere in this issue.)

Anderson Box & Basket Co.: Audubon District, Henderson, Ky. (Platform)
Barrett-Cravens Co.: 3264 W. 30th St., Chicago, Ill.

(Lift Stevadore & Platform)

Bodinson Mfg. Co.: 4401 San Bruno Ave., San Francisco, Cal. (Platform)
Chase Fdry. & Mfg. Co.: 2340 Parsons Ave., Columbus, Ohio. (Lift)

That Name

"FAIRBANKS"

—On a
Hand Truck
Push Cart
Fibre Car
Wheelbarrow
Wheel or
Caster

is Your
Guarantee
for the
Quality of
the Product

Which We
Stand Back of

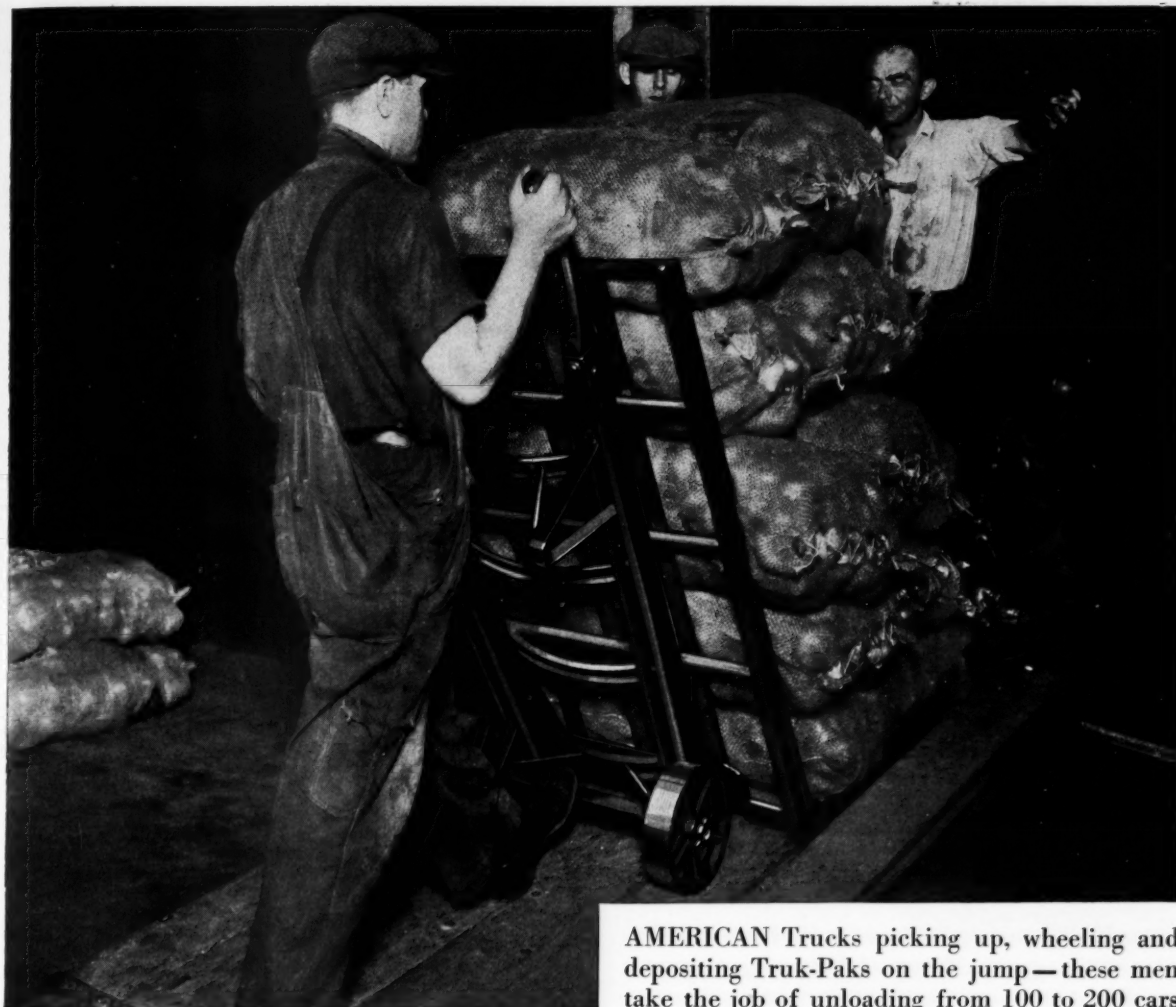


The FAIRBANKS Company
BOSTON NEW YORK PITTSBURGH

Factory—Rome, Ga.

SOLD BY JOBBERS EVERYWHERE

Write for our New 128-Page Catalog.



... UNLOADING 100 TO 200 CARS A NIGHT

FOR some handling problems, nothing, at any price, can equal the hand truck. And for hand truck capacity, convenience, maneuverability, balance and service per dollar, nothing approaches the combination of AMERICAN Pressed Steel Hand Trucks and Truk-Paks.

The illustration shows one of the fleet of AMERICAN Trucks and Truk-Paks which were purchased by T. F. Quinn Co., Inc., of Boston, to replace electric trucks and trailers previously used for unloading cars of fruit and produce.

Working in gangs of four men to a car—one man loading Truk-Paks at the car, one man unloading Truk-Paks in the warehouse, and two men with

AMERICAN Trucks picking up, wheeling and depositing Truk-Paks on the jump—these men take the job of unloading from 100 to 200 cars a night in their regular stride.

What are your handling problems? Have you considered this improved method of handling that makes lift trucks out of hand trucks and brings with it all the attending economies in time and labor?

Ask any dealer about AMERICANs, the hand trucks that are used by leading railroads, steamship companies, warehouses, cotton compresses and industrial and mercantile establishments everywhere. Ask him to demonstrate the Truk-Pak—the hand truck's skid platform that is revolutionizing handling methods. Write for information about the special money back trial offer.

THE AMERICAN PULLEY COMPANY
4200 Wissahickon Avenue, Philadelphia, Pa.



WHEN WRITING ADVERTISERS MENTION DISTRIBUTION AND WAREHOUSING



Nutting

Fig. 37

ROLLER BEARINGS

Save money by buying this stronger, sturdier truck for warehouse use. Rigid frame—has four steel binding rods and center sill. Roller Bearings are standard equipment. SEMI-STEEL castings. Send for catalog of warehouse trucks.

Nutting salesmen in principal cities. If not listed in your phone book, write us.

Nutting Truck Co.
1650 Division St., Faribault, Minn.
202 W. Kinzie St., Chicago, Ill.

HAND TRUCKS (Continued)

Clark Co., Geo. P.; 4 Canal St., Windsor Locks, Conn. (Lift, Platform & Stevedore)
Clark Tractor Co.; Battle Creek, Mich.
(See advertisement elsewhere in this issue.)
 Cleveland Wire Spring Co.; 1283 E. 38th St., N.E., Cleveland, Ohio (Stevedore)
 Oelson Co.; Elvira, Ohio.
 Diamond State Fibre Co.; East Bridgeport, Pa. (Lift)
 Electric Wheel Co.; Walton Heights, Quincy, Ill. (Platform & Stevedore)
 Excelsior Pliumtruck Co.; Woodland Ave., Stamford, Conn. (Lift, Platform & Stevedore)
Fairbanks Co.; Exec. Off., 393-399 Lafayette St., New York, N. Y. (Lift, Platform & Stevedore)
(See advertisement elsewhere in this issue.)
 Fleming Co., F. A.; 9703 Baltic Road, Cleveland, Ohio.
 Francis Co., Chas. E.; Fifth Street, Rushville, Ind. (Platform)
 Globe Vise & Truck Co.; 1451 Front St., N. W., Grand Rapids, Mich.
 Grand Rapids Hand Screw Co.; 1430 Front St., N. W., Grand Rapids, Mich.
 Hamilton Caster & Mfg. Co.; Hamilton, Ohio.
 Howe Chain Co.; 2-30 East Clay Ave., Muskegon, Mich.
 Howe Scale Co.; Rutland, Vt.
 Koenig & Co., Edward L.; 569½ West Lake St., Chicago, Ill. (Lift, Platform & Stevedore)
 Lansing Co.; 602 Cedar St., Lansing, Mich. (Platform & Stevedore)
 Lewis-Shepard Co.; 124 Walnut St., Watertown Sta., Boston, Mass. (Lift & Stevedore)
 Lyon Iron Works, Inc.; Box A, Greene, N. Y. (Lift)
 McKinney Mfg. Co.; Liverpool & Metropolitan Sts., Pittsburgh, Pa. (Stevedore)
 Marion Malleable Iron Works; Marion, Ind. (Dolly)
 Market Forge Co.; Garney St., Everett, Mass.
 Menasha Wood Split Pulley Co.; Menasha, Wis. (Lift & Stevedore)
 Mercury Mfg. Co.; 4148 S. Halsted St., Chicago, Ill.
Nutting Truck Co.; 202 W. Kinzie St., Chicago, Ill. (Platform & Stevedore)
 Orangeville Mfg. Co.; Orangeville, Pa.
 Revolver Co.; 396 Garfield Ave., Jersey City, N. J.
(See advertisement elsewhere in this issue.)
 Saginaw Stamping & Tool Co.; Saginaw, Mich.
Self Lifting Piano Truck Co.; Findlay, Ohio. (Special Piano)
(See advertisement elsewhere in this issue.)
Service Caster & Truck Co.; 517 N. Albion St., Albion, Mich. (Lift and Platform)
(See advertisement elsewhere in this issue.)
 Streich & Bro., A.; 318 Eighth St., Oshkosh, Wis.
 Stuebing-Cowan Co.; 312 E. Court St., Cincinnati, Ohio. (Lift and Platform)
 Towles Mfg. Co., John T.; 1010 Evans St., Cincinnati, Ohio. (Lift and Platform)
 Transmission Ball Bearing Co., Inc.; 1005 Military Rd., Buffalo, N. Y. (Elevating and Changeable Platform)
 Tucker & Dorsey Mfg. Co.; Dept. D.W., S. State and Bates Sts., Indianapolis, Ind. (Platform)
 Warren Mfg. Co.; 10 Exchange St., Chicopee, Mass.
 Warsaw Elevator Co.; 216 Fulton St., Warsaw, N. Y. (Platform and Stevedore)
 West Bend Equip. Co.; 200 So. Water St., West Bend, Wis.

WHEN WRITING ADVERTISERS MENTION DISTRIBUTION AND WAREHOUSING

Make Profits by Saving Costs

This New Truck is so built it moves loads more quickly and easily.

Let us send you Bulletin—made in all sizes.



No. 907

This is a FULLY Guaranteed Truck.

THE H. ZERING MFG. CO.,
Division of the Hamilton Caster & Mfg. Co.
Oakley Station, Cincinnati, Ohio

Western Wheelbarrow Mfg. Co.; So. Fort Smith, Ark. (Stevedore)
 Whitehurst Mfg. Corp., R. W.; Cooke & Smallwood Sts., Norfolk, Va. (Platform, Stevedore and Dolly)
Zering Mfg. Co., H.; Div. of Hamilton Caster & Mfg. Co., Brownway and Railroad Sts., Oakley Station, Cincinnati, Ohio.

HOISTS, CHAIN

Boston & Lockport Block Co.; 100 Conder St., East Boston, Mass.
 Chisholm-Moore Hoist Corp., Div. of Columbus McKinnon Chain Co.; 4056 Lakeside Ave., Cleveland, Ohio.
 Ford Chain Block Co.; Second & Diamond Sts., Philadelphia, Pa.
 Green Co., Inc., G. S.; 72 Warren St., New York, N. Y.
 Harrington Co.; Callowhill & 17th St., Philadelphia, Pa.
 Hobbs Co., Clinton E.; 3335 Pearl St., Boston, Mass.
 Louden Mch. Co.; 1116 Broadway, Fairfield, Iowa.
 Moore Co., Franklin; Winsted, Conn.
 Morris, Inc., Herbert; 10 Lawrence Pl., Buffalo, N. Y.
 New Jersey Fdry. & Machine Co.; 9 Park Place, New York, N. Y.
 Olsen Testing Machine Co., Tinius; Philadelphia, Pa.
 Reading Chain & Block Corp.; 2100 Adams St., Reading, Pa.
 Roeper Crane & Hoist Works, Inc.; 1776 No. Tenth St., Reading, Pa.
 Seattle Chain & Mfg. Co.; 6921 E. Marginal Way, Seattle, Wash.
 Wright Mfg. Co.; 1918 Thomas St., Lisbon, Ohio.
 Yale & Towne Mfg. Co.; 548 Pacific St., Stamford, Conn.

HOISTS, ELECTRIC

Box Crane & Hoist Corp.; Trenton Ave. & E. Ontario St., Philadelphia, Pa.
 Harrington Co.; Callowhill & 17th St., Philadelphia, Pa.
 Hobbs Co., Clinton E.; 3335 Pearl St., Boston, Mass.
 Louden Machinery Co.; 1116 Broadway, Fairfield, Iowa.
 Reading Chain & Block Corp.; 2100 Adams St., Reading, Pa.
 Yale & Towne Mfg. Co.; 548 Pacific St., Stamford, Conn.

INSECTICIDES

American Cynamid Co.; 535 Fifth Ave., New York, N. Y.
 Barrett Co.; 40 Rector St., New York, N. Y.
 Brooklyn Chemical & Disinfecting Co.; 622 Myrtle Ave., Brooklyn, N. Y.
Calceyanide Co.; 60 E. 42nd St., New York, N. Y.
(See advertisement elsewhere in this issue.)
 Carbol Chemical Co.; Harrisville Road, Natural Bridge, N. Y.
 Carbide & Carbon Chemicals Corp.; 30 E. 42nd St., New York, N. Y. (gas).
Cenol Co., Dept. M.; 4250-56 N. Crawford Ave., Chicago, Ill.
 Chemical Supply Co.; 2450 Canal Road, Cleveland, Ohio.
 Clarkson Chemical Co.; 213 Main St., Williamsport, Pa.
 Electrolux, Inc.; 250 Park Ave., New York, N. Y.
 Enos Chemical Co.; 2367 Logan Blvd., Chicago, Ill.
 Girard Co., Inc., Felix; Fourth Ave. and Franklin, Minneapolis, Minn.
 B. F. Gottlieb Chemical Co.; 148 West 24th St., New York, N. Y.
 Grasseil Chemical Co.; Guardian Bldg., Cleveland, Ohio.
 Guarantee Exterminating Co.; 11 West 42nd St., New York, N. Y.

CENOLIN

Moth-Proofing Preparations

WITH FOUR YEAR

Written Guarantee. Ask Us for Particulars and Free \$1.00 Size Package for Test Purposes

Cenol Company—Dept. M.
4250-56 No. Crawford Ave.
Chicago, Illinois

COMPARISON Makes a Great Product Greater

A large customer, who had been securing the usual excellent results from Industrial Calcyanide, was recently persuaded to try a competitive product. The tests concluded, the company returned to the employment of Industrial Calcyanide with enthusiasm akin to that of a mother welcoming a lost child.

Industrial Calcyanide heads the list of insecticides and fumigants. It is dependable to an amazing degree, producing the same excellent results day after day, year after year. It is used by hundreds of concerns in a great variety of industries.

Industrial Calcyanide thoroughly and completely rids warehouses and stored commodities of clothes moths and all other kinds of insects and rodents.

Industrial Calcyanide is easily, conveniently and safely applied by following the few simple directions in our booklet.

Industrial Calcyanide is marketed by a subsidiary of a \$100,000,000.00 corporation.

Write for Booklet

CALCYANIDE COMPANY
60 East 42nd St., New York City

Distributors: **Chicago**, Smithereen Co., 7417 Stony Island Ave.; **Denver**, The Antiseptic Products Co., 3101 Walnut St.; **Hartford**, The Birchard System, Inc., 312 Church St.; **Hempstead, L. I., N. Y.**, F. K. Harder, 75 Jerusalem Ave.; **Kansas City**, Paramount Fumigating Co., 16 E. 16th St.; **Memphis**, International Rat System, 216 Falls Building; **Minneapolis**, The Hyman Co., 246 W. Broadway; **New Orleans**, B-Wise Exterminating Co., 530 St. Philip St.; **New York City**, Bliss Exterminator Co., Inc., 262 W. 54th St.; **Philadelphia**, Hygienic Sanitation Co., "A" & Loudon Sts.; **Pittsburgh**, German Vermin Exterminating Co., 103 Morewood Ave.; **San Francisco**, John F. Leinen Sanitation Co., 1415 Folsom St.; **Tampa**, G. & R. Manufacturing Co., Inc., 2013 Central Ave.; **Toledo**, Keystone Chemical Co., 1819 Vermont Ave.; **Westaco, Texas**, Ballard's Nurseries, 399 Valley Highway.



... TAKE NO RISKS

Wrap carpets, rugs, draperies and so forth with WHITE TAR Paper. Forty inches wide, in rolls of from 50 to 1000 yards.

Other WHITE TAR products: Naphthalene Flakes, Moth Proof Bags, Cedar Paper, White Tar Moth Spray, Moth Balls, Crystals, Powder and Blocks.

THE WHITE TAR COMPANY
OF NEW JERSEY, Inc.

Division of The Koppers Company
Dept. W, BELLEVILLE TURNPIKE, KEARNY, N. J.
Phone Kearny 3600

INSECTICIDES (Continued)

Hall Laboratories; 428 E. 35th St., Chicago, Ill.
Idico Corp.; 461-79 Eighth Ave., New York, N. Y.
Plunkett Chemical Co.; 3500 So. Morgan St., Chicago, Ill.
Potter Mfg. Co., Inc.; Dept. H, 12 Henry St., Bloomfield, N. J.
Standard Oil Co. of N. J.; 2 Park Ave., New York, N. Y.
Tinolon Co. of Am.; 150 Nassau St., New York, N. Y.
Wells, E. S.; Jersey City, N. J.
West Disinfecting Co., 16 Barn St., Long Island City, N. Y.
White Tar Co.; Dept. W, Belleville Turnpike, Kearny, N. J.

PACKING MATERIAL, PAPER

Cotton Wood Products Co.; 3 Haven St., Boston, Mass.
Kimberly Clark Co.; 208 S. La Salle St., Chicago, Ill.
Pilcher-Hamilton-Daily Co.; 349 West Ontario, Chicago, Ill.
Rochester Folding Box Co.; Boxart St., Rochester, N. Y. (Fibredown)

FOXWRAP

THE IDEAL WRAPPING PAPER

FOXCO

PAPER FURNITURE COVERS

TWINES

VAN PADS

Pilcher-Hamilton-Daily Company

349 West Ontario

Chicago, Ill.

GEORGE S. FOX, MANAGER, WAREHOUSE SUPPLY DEPT.

PACKING MATERIAL—RICE HULLS

McGill Bros. Rice Mills; Stuttgart, Ark.

RICE HULLS

Ideal for packing uses

Rice Hulls are clean and "springy." They are light in weight (only 7½ pounds per CUBIC FOOT). They are free-flowing and non-packing (cannot be packed even by mechanical means). They are NEUTRAL IN ODOR.

Warehouses will be especially interested in Rice Hulls for packing hygroscopic materials to prevent moisture absorption, and for insulation either hot or cold.

WRITE FOR SAMPLES AND PRICES

Sold sacked or bulk. Minimum weight, 30,000 pound carload. Low in price, economical to use.

McGill Brothers Rice Mill
STUTTGART, ARKANSAS

PADS, FURNITURE CANVAS

American Excelsior Corp.; 1000 N. Halsted St., Chicago, Ill.
 Arbelt Co., S.; 119 McKibben St., Brooklyn, N. Y.
 Barnett Canvas Goods & Bag Co.; 127 Arch St., Philadelphia, Pa.
 Wm. H. Breen; 219 Rutherford Ave., Charlestown, Mass.
 (See advertisement elsewhere in this issue.)
 Chicago Quilt Mfg. Co.; 1357 Roosevelt Rd., Chicago, Ill.
 Chicago Asbestos Table Mat Co.; 2815 Irving Park Blvd.; Chicago, Ill.
 Donnelly, Son & Putnam; 92 Sunswick St., Long Island City
 N. Y.

(See advertisement elsewhere in this issue.)

Driver Bros., Inc.; 500 So. Green St., cor. Congress St., Chicago, Ill.
 Ehrick & Co., Fred; 192 24th St., Brooklyn, N. Y.
 Fulton Bag & Cotton Mills; Atlanta, Ga.
 Gotsch Co., Walter M.; 630 W. Adams St., Chicago, Ill.
 Hettrick Mfg. Co.; D.W.28 Summit & Magnolia Sts., Toledo, Ohio.
 Humphry's Sons, R. A.; 1020 Callowhill St., Philadelphia, Pa.

New Low prices on FULCO PADS

Considering these new low prices, and the excellent quality of "FULCO" GILT-EDGE pads, you can't get more for your money—anywhere. And we guarantee that "FULCO" pads will not lump. What more could you ask?

36x62"	.....	\$12.75
52x62"	.....	\$17.50
80x62"	.....	\$23.50

per dozen, f.o.b. shipping point. Less than one dozen, 10% extra. Terms 2% 10 or net 30 days on approved credit.

Get our prices on tarpaulins and burlap also.

Fulton Bag & Cotton Mills

St. Louis Minneapolis Brooklyn Atlanta New Orleans Kansas City, Kan.

WM. A. IDEN CO.
 564 Washington Boulevard
 CHICAGO

STORAGE AND VAN SUPPLIES
 VAN LINER PADS
 FURNITURE LOADING PADS
 PIANO DUST AND MOVING COVERS
 STAKE TRUCK AND TAIL GATE COVERS
 GRAND PIANO SKID OUTFITS
 HOISTING EQUIPMENT
 TWINE AND ROPE
 BURLAP

PHONE OR WRITE FOR CATALOGUE
 MAIN 1586

MICHIGAN
TENT & AWNING CO.

KERSEY FELT

FURNITURE LOADING PADS
 PIANO MOVING COVERS

TRUCK TARPAULINS

Office & Factory, 1922 W. Canfield, Detroit, Mich.

"Send Us Your Inquiries Today"



WHEN WRITING ADVERTISERS MENTION DISTRIBUTION AND WAREHOUSING

The Greatest Value of Them All!
Extra Heavy Khaki Covering

To Stimulate Summer Business
 Prices Reduced
 ON

Dreadnaught Furniture Pads

Never Before Such Values

DREADNAUGHT FURNITURE PADS

72" x 80" cut size @ \$25.00 per doz.
 72" x 72" cut size @ 23.00 per doz.
 54" x 72" cut size @ 19.00 per doz.
 36" x 72" cut size @ 15.00 per doz.

F. O. B. New Haven, Conn.

Sootch Dundee Burlap Furniture Pads, any length desired at 22c. per lb.

AMERICA'S LARGEST PAD MANUFACTURERS
 SINCE 1910

NEW HAVEN QUILT & PAD COMPANY
 NEW HAVEN, CONN.

"IRON HORSE" BRAND
Furniture Van Pads

Foremost in Quality, Workmanship
 and Strength



Generally accepted by Ware-
 housemen as the BEST

Write for Illustrated Catalogue

A. L. Reach Textile Co., Inc.
 Main Office and Sales Room
 6 and 8 West 20th Street
 New York, N. Y.

Iden Co., Wm. A.; 564 Washington Blvd., Chicago, Ill.

Louisville Bedding Co.; Louisville, Ky.

Maish Co., Chas. A.; 1125 Bank St., Cincinnati, Ohio.

Walls Supply Co.; 421 Arch St., Philadelphia, Pa.

Michigan Tent & Awning Co.; 1922 W. Canfield Ave., Detroit, Mich.

Milvo Awning & Tent Works; 101 W. Liberty St., Rome, N. Y.

New Haven Quilt & Pad Co.; 80 Franklin St., New Haven, Conn.

New York Drop Cloth Co.; 150 Greene St., New York, N. Y.

Olan Mfg. Co., M.; 258 Hudson Ave., Rochester, N. Y.

Oshkosh Excelsior Co.; Oshkosh, Wis.

Ottawa Cushion Co.; Rock Island, Ill.

Reach Textile Co., A. L.; 6-8 West 20th St., New York, N. Y.

PAI

Royce
 Sneller
 Stand
 Taylor
 Union
 Wagner
 Wilcox

Allen,
 Altman
 American
 Atlantic
 Boston
 Burkha
 Dale B
 Dugre
 Excelsior
 Gardner
 Indiana
 Little
 Orange
 Phillips
 Roches
 Sheboy
 Washin
 Webster

Art M
 Oycion
 Ebinger
 Edward
 Hausen
 Mills C
 Page E
 Phoenix
 Sanym
 Smith,
 Ch
 Tyler

Astrup
 Barnett
 Bauer,
 Breer
 Buckey
 Chicag
 Donn
 Driver
 Fulton

Goss C
 Gotsch
 Hettrick
 Holman
 Kenne

PADS, FURNITURE CANVAS (Continued)

Royal Bedding Co.; 721-27 Cass Ave., St. Louis, Mo.
 Snelson Bros., Inc.; 59-65 Washington St., N., Boston, Mass.
 Standard Garment Co.; Michigan & Orange St., Toledo, Ohio.
 Taylor Whse. Sy. Co., R. G.; 2357 Milwaukee Ave., Chicago, Ill.
 Union Carpet Lining Co.; New London, Conn.
 Wagner Awning Co.; 2658 Scranton Rd., Cleveland, Ohio.
 Wilcox Co., M. I.; 210 Water St., Toledo, Ohio.

Royal Pads Wear

We make them that way. Strong, durable khaki covering insures long service. The cotton cannot lump because every pad is double box stitched.

SPECIAL PRICES

No. 200—Cut Size 36 x 72.....\$12.00 per doz.
 No. 300—Cut Size 54 x 72.....18 00 per doz.
 No. 400—Cut Size 72 x 80.....24.00 per doz.

PROMPT DELIVERY

WIRE TODAY

ROYAL BEDDING COMPANY

St. Louis

721-727 Cass Ave.

Missouri

PADS, FURNITURE EXCELSIOR

Allen, Inc., Charles M.; Fulton, N. Y.
 Altamont Mfg. Co.; Altamont, Ill.
 American Excelsior Corp.; 1000 N. Halsted St., Chicago, Ill.
 Atlantic Excelsior Co.; 507 W. 30th St., New York, N. Y.
 Boston Excelsior Co.; 29th and 11th Avenue, New York, N. Y.
 Burkhardt Mfg. Co., F.; 4900 N. Second St., St. Louis, Mo.
 Dale Bros. Excelsior Pad Co.; Grand Rapids, Mich.
 Dupre Mfg. Co.; North Ave., N. E. & So. Ry., Atlanta, Ga.
 Excelsior Supply Co.; Second & Smith Sts., Cincinnati, Ohio
 Gardner Pad Co.; Gardner, Mass.
 Indiana Excelsior Co.; Keystone & Belt, Indianapolis, Ind.
 Little Rock Excelsior & Wrapper Mfg. Co.; Box 146, No. Little Rock Ark
 Orange Mfg. Co.; Elfsand, N. C.
 Phillips Excelsior Co.; Chattanooga, Tenn.
 Rochester Pad & Wrapper Co.; 1464 Lyell Ave., Rochester, N. Y.
 Sheboygan Pad Co.; Sheboygan, Wis.
 Washington Excelsior & Mfg. Co.; Foot of Main St., Seattle, Wash.
 Webster Bros. Mfg. Co.; Mason City, Iowa

PARTITIONS, STEEL

Art Metal Construction Co.; Jamestown, N. Y.
 Cyclone Fence Co.; Box 517, Waukegan, Ill.
 Ebinger Sanitary Mfg. Co., D. A.; 180 Lucas St., Columbus, Ohio.
 Edwards Mfg. Co.; 529 Eggleston Ave., Cincinnati, Ohio.
 Hauserman Co., E. F.; 6991 Grant Ave., Cleveland, Ohio.
 Mills Co., The; Wayside Rd. & Nickel Plate R. R., Cleveland, Ohio.
 Page Fence & Wire Prod. Assn.; Dept. Z, 215 N. Michigan Ave., Chicago, Ill.
 Phoenix Wire Works; Kirby Ave. and E. & G. T. R.R., Detroit, Mich.
 Sanymetal Prod. Co.; 1705 Urbana Rd., Cleveland, Ohio.
 Smith, F. P., Wire & Iron Works; Fullerton, Clybourn & Ashland Aves. & Chester St., Chicago, Ill.
 Tyler Co., W. S.; 3621 Superior Ave., N. E., Cleveland, Ohio.

PIANO COVERS

Astrup Co.; 2937 W. 25th St., Cleveland, Ohio.
 Barnett Canvas Goods & Bag Co.; 127 Arch St., Philadelphia, Pa.
 Bauer, Frederick J.; 65 to 69 Fourth Ave., New York, N. Y.
 Breen, Wm. H.; 219-231 Rutherford Ave., Charlestown, Mass.
 (See advertisement elsewhere in this issue.)
 Buckeye Tent, Awning & Mfg. Co.; 264 Spruce St., Columbus, Ohio
 Chicago Asbestos Table Mat Co.; 2815 Irving Park Blvd., Chicago, Ill.
 Donnelly Son & Putnam; 92 Sunswick St., Long Island City N. Y.
 Driver Bros., Inc.; 500 So. Green St., cor. Congress St., Chicago, Ill.
 Fulton Bag & Cotton Mills; Atlanta, Ga.
 (See advertisement elsewhere in this issue)
 Goss Co., J. O.; Woodbridge & Bates St., Detroit, Mich.
 Gotach Co., Walter M.; 630 W. Adams St., Chicago, Ill.
 Hettrick Mfg. Co.; D.W.28, Summit & Magnolia Sts., Toledo, Ohio
 Holtsman, Henry, & Sons Co.; 2000 to 2682 E. Main St., Columbus, Ohio.
 Kennedy Car Liner & Bag Co.; Shelbyville, Ind. (Paper)

COMPLETE LINE

Furniture
and
Piano Movers
Supplies



Storage
Warehouse
and
Van Equipment

PIANO COVERS
GRAND AND UPRIGHT

Lifting Harness with iron bar.
Keyboard Belts, Heel Boot.
Steel Blocks, Rope.

Derricks, Dollies, Benches, Loading Pads, Scotch Dundee Burlap, Form Fitting Pads, Van Liner Pads, Waterproof Covers.

PRICE LIST ON REQUEST

DONNELLY SON & PUTNAM

92-94 Sunswick Street

Long Island City, N. Y.

FOR FULL LINE SEE JANUARY, 1930, ISSUE

Kimball Co., W. W.; 306 S. Wabash Ave., Chicago, Ill.
 Michigan Tent & Awning Co.; 1922 W. Canfield Ave., Detroit, Mich.
 (See advertisement elsewhere in this issue.)
 New Haven Quilt & Pad Co.; 80 Franklin St., New Haven, Conn.
 (See advertisement elsewhere in this issue.)
 Pilcher-Hamilton-Dally Co.; 349 West Ontario, Chicago, Ill.
 (Paper)
 (See advertisement elsewhere in this issue.)
 Self Lifting Piano Truck Co., Findlay, Ohio.
 Snelson Bros., Inc.; 59-65 Washington St., No., Boston, Mass.
 Taylor Whse. Sy. Co., B. G.; 2357 Milwaukee Ave., Chicago, Ill.
 Upson-Walton Co.; 1245 W. Eleventh St., Cleveland, Ohio.
 Wilcox Co., M. I.; 210 Water St., Toledo, Ohio.

PIANO DERRICKS AND TRUCKS

Breen, Wm. H.; 219-231 Rutherford Ave., Charlestown, Mass.
 (See advertisement elsewhere in this issue)
 Donnelly Son & Putnam; 92 Sunswick St., Long Island City, N. Y.
 Self-Lifting Piano Truck Co.; Findlay, Ohio.
 Snelson Bros., Inc.; 59-65 Washington St., No., Boston, Mass.

The New Buckeye Sill Piano Truck,
\$39.00

SAVE THE FLOORS WITH 4" RUBBER TIRED CENTER WHEELS WITH 1 3/4" FACE. THE TIRE IS VULCANIZED TO THE WHEEL. \$5.00 EXTRA.

This truck of crucible spring steel and good hickory is designed for stair and general handling of grand and upright pianos. The center wheel construction allows the truck to balance and turn without the usual lifting of the truck and the scraping and marring of the floors. This truck is equipped with straps 2" 3 ply webbing.

STRAPS of 3" 4 PLY WEBBING AND BUCKLES \$6.00 EXTRA. WE HAVE A COMPLETE LINE OF TRUCKS, HOISTS, LIGHT WEIGHT TRUCKS AND COVERS. ASK FOR CIRCULAR.

ALSO TRUCKS FOR

Electric Refrigerators

and Parlor Furnaces

Manufactured by

SELF-LIFTING PIANO TRUCK CO.

FINDLAY, OHIO

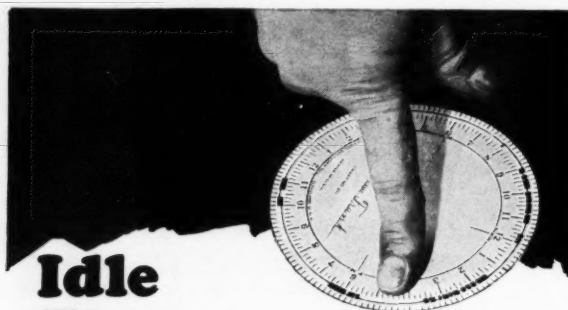
WHEN WRITING ADVERTISERS MENTION DISTRIBUTION AND WAREHOUSING

RACKS, STORAGE

Art Metal Construction Co.; Jamestown, N. Y.
 Barrett-Cravens Co.; 3264 W. 30th St., Chicago, Ill.
 Berger Mfg. Co.; 1039 Belden Ave., N. E., Canton, Ohio.
 De Luxe Metal Furniture Co.; 60 E. 42nd St., New York, N. Y.
 Economy Eng. Co.; 2651 W. Van Buren St., Chicago, Ill.
(See advertisement elsewhere in this issue.)
 Heller & Sons, P. A.; 219 Griswold St., Detroit, Mich.
 Irving Iron Works Co.; Dutchkill Creek & 3rd St., Long Island City, N. Y.
 Koenig & Co., Edward L.; 569 1/2 West Lake St., Chicago, Ill.
 Lewis-Shepard Co.; 124 Walnut St., Watertown Sta., Boston, Mass.
 Lupton's Sons Co., David; 2270 E. Allegheny Ave., Philadelphia, Pa.
 Lyon-Metal Products, Inc.; City Limits, Aurora, Ill.
 Market Forge Co.; Garney St., Everett, Mass.
 Medart Mfg. Co., Fred; Pontiac & DeKalb Sts., St. Louis, Mo.
 Mills Co., The; 5320 St. Clair Ave., Cleveland, Ohio.
 New Britain Mch. Co.; 140 Chestnut St., New Britain, Conn.
 Perfection Metal Container; 3608 E. 82nd St., Cleveland, Ohio.
 Revolver Co.; 396 Garfield Ave., Jersey City, N. J.
(See advertisement elsewhere in this issue.)

RECORDERS, MOTOR TRUCK

Brown Spring Oiler Co.; 6913 Carnegie Ave., Cleveland, Ohio.
 Electric Tachometer Corp.; Broad and Spring Garden Sts., Philadelphia, Pa.
 Kenfell & Esser Co.; Hoboken, N. J.
 Ohmer Fare Register Co.; 740 Bolander St., Dayton, Ohio.
 Service Recorder Co.; 458 Hanna Bldg., Cleveland, Ohio.
 Stewart-Warner Speedometer Corp.; Diversey Blvd., Chicago, Ill.
 U. S. Recording Instruments Corp.; 555 W. 57th St., New York, N. Y.
 Veeder Mfg. Co.; 54 Sargeant St., Hartford, Conn.



Idle Time

And You Can Put Your Finger Right On It!

Now for the first time, perhaps, you feel you are *really in control* of that truck!

No more "hunches" no more suspicions, no more unfounded accusations, *no more arguments*—

Just quiet facts, which everybody respects—shown right on the chart.

We ask you, now isn't that the best way to manage motor trucks?

Write for Bulletin—"Ten Methods of Getting More Work Out of Motor Trucks."



THE SERVIS RECORDER
"Keeps Trucks Busy"

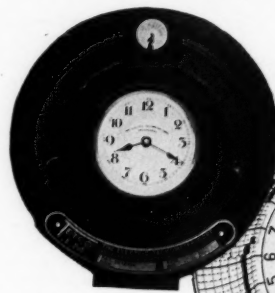
THE SERVICE RECORDER COMPANY
 CLEVELAND - OHIO - U.S.A.



1931 AMERICA FORWARD MARCH

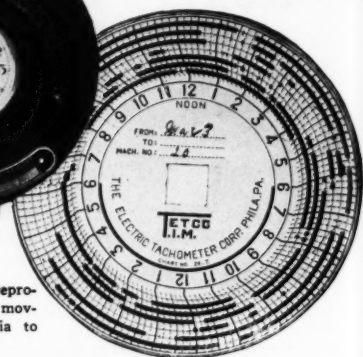
WHEN WRITING ADVERTISERS MENTION DISTRIBUTION AND WAREHOUSING

You Don't Question Facts



Recorder 534"
 Chart 434"

This chart is an actual reproduction of trip made by a moving van from Philadelphia to Chicago and return.



TETCO I.I.M.

Gives it to you Straight

You can't very well out-argue facts. They have a persistent way of insisting that the truth is the truth—no more—no less. If TETCO T.I.M. says your truck worked steadily for four hours you can depend on it that it did. If TETCO T.I.M. says your truck idled from 10 A. M. to 2 P. M. you can be sure that that's what it did. If you want to know what your trucks are doing—and when—put TETCO T.I.M. on the job. TETCO T.I.M. will give you an exact check on truck operation.

TETCO T.I.M. gives you a definite check on long trips. This seven-day recorder automatically changes from day to day, keeping daily records intact until the chart is changed. Think of the advantages of 7-day recording. Easier comparison of daily operation—seven days' record clearly outlined on one chart instead of seven. Chart changed once a week instead of daily, effecting a saving in time as well as reducing cost of charts.

No mechanical or electrical connections. A steel stylus operating on a waxed chart does away with old-fashioned pen and ink. Slow and fast adjustments can be made. Visible clock dial gives driver a time piece and removes his antagonism for ordinary recorders.

TETCO T.I.M. SEVEN-DAY RECORDER with a year's supply of charts, \$40.00.

Write for quantity discounts.

The Electric Tachometer Corporation
 BROAD AND SPRING GARDEN STREETS
 Philadelphia Penna.

REFRIGERATING MACHINERY

Vilter Mfg. Co.; 2120 So. First St., Milwaukee, Wis.

SAWS, PORTABLE MACHINE

American Saw & Mfg. Co.; 71 Boylston St., Springfield, Mass.
 American Saw Mill Mch. Co.; Hackensack, N. J.
 Atkins & Co., Inc.; E. C.; 410 S. Illinois St., Indianapolis, Ind.
 C. H. & E. Mfg. Co.; Milwaukee, Wis.
 Challenge Co.; 193 River St., Batavia, Ill.
 Cresson-Morris Co.; 18th & Allegheny Aves., Philadelphia, Pa.
 Dieston & Sons, Inc.; Hy.; Tacony Sta., Philadelphia, Pa.
 Electro-Magnetic Tool Co.; W. 10th St. & 52nd Ave., Cicero, Ill.
 Fairbanks, Morse & Co.; So. Wabash Ave., Chicago, Ill.
 Kaetker Saw Co.; 4600 Spring Grove Ave., Cincinnati, Ohio.
 Kennedy, Ralph M.; 111 No. 7th St., Philadelphia, Pa.
 Leach Co.; Oshkosh, Wis.
 Lippert Saw Co., E. T.; 19 Lincoln Ave., Millvale, Pittsburgh, Pa.
 New Holland Machine Co.; New Holland, Pa.
 New Winona Mfg. Co.; 994 West Fifth St., Winona, Minn.
 Ohlen-Bishop Co.; Simpson Lane & Ingleside Ave., Columbus, Ohio.
 Onan & Sons, D. W.; 44 Royalston Ave., Minneapolis, Minn.
 Schmidt Bros. Co.; Davenport, Iowa.
 Skisaw, Inc.; 3814 Ravenswood Ave., Chicago, Ill.
 Taylor Iron Works & Supply Co.; Macon, Ga.
 Wallace & Co., J. D.; 134 S. California Ave., Chicago, Ill.
 Worth Machinery Manufacturers, Los Angeles, Cal.

SCALES

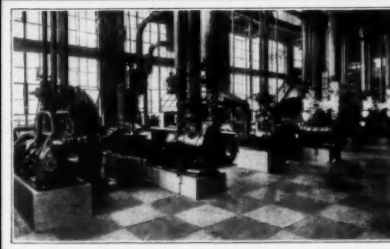
American Kron Scale Co.; 424 E. 53rd St., New York, N. Y.
 American Scale Co.; 517 Delaware St., Kansas City, Mo.
 Beckman Bros.; Des Moines, Iowa.
 Grunner Foundry & Mch. Co.; Peru, Ill.
 Buffalo Scale Mfg. Co., Inc.; 1200 Niagara St., Buffalo, N. Y.
 Dayton Scale Co.; Dayton, Ohio.
 Exact Weight Scale Co.; 265 W. Spring St., Columbus, Ohio.
 Fairbanks & Co., E. & T.; St. Johnsbury, Vt.
 Fairbanks Morse & Co.; 900 S. Wabash Ave., Chicago, Ill.
 Gaston Scale Co.; Beloit, Wis.
 Howe Scale Co.; Rutland, Vt.
 International Business Machines Corp.; 50 Broad St., New York, N. Y.
 Meadows Mfg. Co.; Bloomington, Ill.
 Merrick Scale Mfg. Co.; 87 Summer St., Passaic, N. J.
 Moline Implement Co., Inc.; Moline, Ill.
 Sawyer Spec. Scale Co.; Jacksonville, Fla.
 Standard Scale & Supply Co.; 412 First Ave., Pittsburgh, Pa.
 Stimpson Computing Scale Co.; Logan & Breckenridge Sts., Louisville, Ky.
 Toledo Scale Co.; Toledo, Ohio.
 Weightograph Co.; 3001 N. Broadway, St. Louis, Mo.

STENCIL MACHINES

Bradley Mfg. Co., A. J.; 101 Beekman St., New York, N. Y.
 Diagraph Stencil Mch. Corp.; 2913 Clark Ave., St. Louis, Mo.
 Ideal Stencil Mch. Co.; 22 Ideal Block, Belleville, Ill.
 Marsh Stencil Mch. Co.; 35 Marsh Bldg., Belleville, Ill.
 United Autograph Register; 2316 W. 43rd St., Chicago, Ill.

The manufacturers whose success today appears so solid that nothing can affect it, have attained that happy state because of two main reasons. They are never satisfied with their product and constantly improve it with the change and growth of the people who buy it. The second reason is that their advertising task is never done.

COOL - COLD - FREEZING!



IN THE warehouse of today, not one temperature is required . . . but many! Therefore, when refrigerating machinery is considered, it is necessary that thought be given to securing the kind that will operate as planned.

Vilter's long experience in the cold storage field makes it a certainty that the Vilter-designed installation will afford maximum satisfaction . . . at a minimum initial cost and upkeep.

In the Great Lakes Terminal Warehouse, Toledo, are three 15' x 9' x 18' Vilter Two-Stage Compressors, and all other equipment designed by Vilter to keep this huge plant running. Yet, whether the requirements be light or at the peak of the season, there is ample capacity for overload.

We shall be glad to send you information on any phase of refrigeration. If you figure on changing-over or erecting a new warehouse, write our engineers for co-operation . . . at once!

THE VILTER MANUFACTURING CO.
2120 So. 1st Street - Milwaukee, Wis.

Vilter
ICE-MAKING AND
REFRIGERATING
MACHINERY

The Vilter Manufacturing Co.,
2120 So. 1st Street, Milwaukee, Wis.

Gentlemen:

Please send information on Refrigeration for the Warehouse.

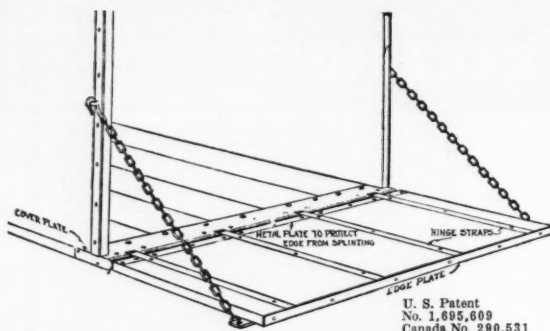
Name.....

Address.....

**SINCE
1867**

TAILBOARDS—(HARDWARE)

Kneuer Tail Board Co., Inc.; 127 Van Buren St., Newark, N. J.

THIS PATENTED
SPACELESS TAILBOARDMAKES LOADING AND
UNLOADING EASIER

Its surface is perfectly smooth and furniture or trucks can be rolled easily over it.

Elimination of space between floor and tailboard in open position prevents jamming or breaking. Many other features for safety and convenience. Replace your old tailboards with this efficient one. See your body builder.

KNEUER TAIL BOARD CO., INC.
127-129 Van Buren St. Newark, N. J.

Lansing Co.; 602 Cedar St., Lansing, Mich.

Lyon Iron Works, Inc.; Box A, Greene, N. Y.

Menasha Wood Split Pulley Co.; Menasha, Wis.

Mercury Mfg. Co.; 4148 S. Halsted St., Chicago, Ill.

Nutting Truck Co.; 202 W. Kinzie St., Chicago, Ill.

(See advertisement elsewhere in this issue.)

Service Caster & Truck Co.; 517 N. Albion St., Albion, Mich.

(See advertisement elsewhere in this issue.)

Sippel Co., Wm. H.; Dept. D-W, South Bend, Ind.

Streich & Bro. Co., A.; 318 Eighth St., Oshkosh, Wis.

Warren Mfg. Co.; 10 Exchange St., Chicopee, Mass.

West Bend Equip. Co.; 200 So. Water St., West Bend, Wis.

Whitehead & Kales, 58 Hattiner, River Rouge, Mich.

Yale & Towne Mfg. Co.; 548 Pacific St., Stamford, Conn.

Zerling Mfg. Co., H.; Div. of Hamilton Caster & Mfg. Co., Brown-
way and Railroad Sts., Oakley Station, Cincinnati, Ohio.
(See advertisement elsewhere in this issue.)

TRUCKS, INDUSTRIAL

Atlas Car & Mfg. Co.; 1100 Ivanhoe Rd., Cleveland, Ohio.

Automatic Transportation Co., Inc.; 2937 Main St., Buffalo, N. Y.

Baker-Rauling Co.; 2162 W. 25th St., Cleveland, Ohio. (Electric)

Clark Tractor Co.; Battle Creek, Mich.

(See advertisement elsewhere in this issue.)

Crescent Truck Co.; 165 N. 10th St., Lebanon, Pa.

Elwell-Parker Elec. Co.; 4110 St. Clair Ave., Cleveland, Ohio.

Fairbanks Co.; Exec. Off., 393-399 Lafayette St., New York, N. Y.

(See advertisement elsewhere in this issue.)

Howe Chain Co.; 2-30 East Clay Ave., Muskegon, Mich.

Kent Machine Co.; Kent, Ohio.

Koppel Industrial Car & Equip. Co.; Koppel, Pa.

Ladel Mfg. Co.; New Philadelphia, Ohio.

Lakewood Eng. Co.; Berea Rd., Cleveland, Ohio.

Lyon Iron Works, Inc.; Box A, Greene, N. Y.

Market Forge Co.; Garney St., Everett, Mass.

Mercury Mfg. Co.; 4148 S. Halsted St., Chicago, Ill.

Miami Mfg. Co.; Peru, Ind.

New Britain Mche. Co.; 140 Chestnut St., New Britain, Conn.

Nutting Truck Co.; 202 W. Kinzie St., Chicago, Ill.

(See advertisement elsewhere in this issue.)

Ottumwa Iron Works, Inc.; 402 W. Main St., Ottumwa, Iowa.

Peerless Wire Goods Co.; 2910 Ferry St., Lafayette, Ind.

Wright-Hibbard Ind. Elec. Truck Co.; Phelps, N. Y.

Yale & Towne Mfg. Co.; 548 Pacific St., Stamford, Conn.

TRUCKS, ROLL PAPER

Norman, Wm. A.; 180 No. Michigan Ave., Chicago, Ill.

Seaman Paper Co.; 360 No. Michigan Ave., Chicago, Ill.

The NORMAN Truck

Pat. No. 1207433

Saves Paper—Time—Money—Men

Handles roll paper, simply and easily, without damage even to the outer sheets. Handling paper pays, and Norman Trucks get you the business.



William A. Norman
180 North Michigan
Ave., Chicago, Ill.

Ask for
descriptive
circular.

TARPAULINS—See Covers, Truck

TRACTORS, INDUSTRIAL

Atlas Car & Mfg. Co.; 1100 Ivanhoe Rd., Cleveland, Ohio.

Automatic Transportation Co., Inc.; 2937 Main St., Buffalo, N. Y.

Baker-Rauling Co.; 2162 W. 25th St., Cleveland, Ohio. (Electric)

Case Threshing Machine Co., J. I.; Dept. I, Racine, Wis.

Caterpillar Tractor Co.; San Leandro, Cal.

Clark Tractor Co.; Battle Creek, Mich.

(Gas Powered)

(See advertisement elsewhere in this issue.)

Cleveland Tractor Co.; Lamb & Euclid Aves., Cleveland, Ohio.

Crescent Truck Co.; 165 N. 10th St., Lebanon, Pa.

Elwell-Parker Elec. Co.; 4110 St. Clair Ave., Cleveland, Ohio.

J. T. Tractor Co.; 179th and St. Clair Ave., Cleveland, Ohio.

Lakewood Eng. Co.; Berea Road, Cleveland, Ohio.

Mercury Mfg. Co.; 4148 S. Halsted St., Chicago, Ill.

Monarch Tractors, Inc.; Watertown, Wis.

Prescott Co.; P. O. Box 307, Menominee, Mich. (Gasoline)

Stuebing-Cowan Co.; 312 E. Court St., Cincinnati, Ohio. (Electric)

Towmotor, Inc.; Cleveland, Ohio. (Gasoline)

Yale & Towne Mfg. Co.; 548 Pacific St., Stamford, Conn.

Yuba Mfg. Co.; San Francisco, Cal.

TRAILERS, INDUSTRIAL TRUCK

Atlas Trailer & Water Mufflers, Inc.; U. S. Nat'l Bank Bldg., Galveston, Tex.

Automatic Transportation Co., Inc.; 2937 Main St., Buffalo, N. Y.

Clark Co., Geo. P.; 4 Canal St., Windsor Locks, Conn.

Clark Tractor Co.; Battle Creek, Mich.

(See advertisement elsewhere in this issue.)

Crescent Truck Co.; 165 N. 10th St., Lebanon, Pa.

Howe Chain Co.; 2-30 East Clay Ave., Muskegon, Mich.

Koenig & Co., Edward L.; 569½ West Lake St., Chicago, Ill.

Koppel Industrial Car & Equip. Co.; Koppel, Pa.

Lakewood Eng. Co.; Berea Rd., Cleveland, Ohio.

WHEN WRITING ADVERTISERS MENTION DISTRIBUTION AND WAREHOUSING

TRUCKS, TIERING

Alvey Ferguson Co.; 70 North Ave., Cincinnati, Ohio.

Atlas Car & Mfg. Co.; Cleveland, Ohio.

Automatic Transportation Co.; 2937 Main St., Buffalo, N. Y.

Barrett-Cravens Co.; 3264 W. 30th St., Chicago, Ill.

Couple Gear Elec. Truck Co.; Grand Rapids, Mich.

Crescent Truck Co.; 165 N. 10th St., Lebanon, Pa.

Diamond State Fibre Co.; East Bridgeport, Pa.

Economy Eng. Co.; 2651 W. Van Buren St., Chicago, Ill.

(See advertisement elsewhere in this issue.)

TRUCKS, TIERING (Continued)

Elwell-Parker Elec. Co.; 4110 St. Clair Ave., Cleveland, Ohio.
 Excelsior Plimtruck Co.; Woodland Ave., Stamford, Conn.
 Grand Rapids Vapor Kiln; Grand Rapids, Mich.
 Hydraulic Press Mfg. Co.; 83 Lincoln Ave., Mt. Gilead, Ohio.
 Lakewood Eng. Co.; Berea Rd., Cleveland, Ohio.
 Lewis-Shepard Co.; 124 Walnut St., Watertown St., Boston, Mass.
 Mercury Mfg. Co.; 4148 S. Halsted St., Chicago, Ill.
 New Jersey Fdry. & Machine Co.; 9 Park Place, New York, N. Y.
 Revolver Co.; 396 Garfield Ave., Jersey City, N. J.
 (See advertisement elsewhere in this issue.)
 Service Caster & Truck Co.; 517 N. Albion St., Albion, Mich.
 (See advertisement elsewhere in this issue.)
 Terminal Eng. Co., Inc.; 17 Battery Pl., New York, N. Y.
 Union Steel Prod. Co.; 132 N. Berrien St., Albion, Mich.
 Wright-Hibbard Ind. Elec. Truck Co.; Phelps, N. Y.
 Yale & Towne Mfg. Co.; 548 Pacific St., Stamford, Conn.

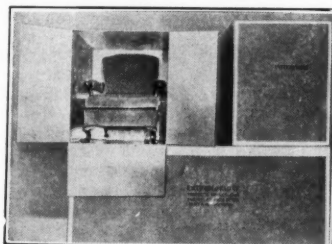
VACUUM CLEANERS, PORTABLE

Allen & Billmyre Co., Inc.; 547 Grand Central Palace, New York, N. Y.
 (Stationary and Portable)
 Arco Vacuum Corp.; 40 W. 40th St., New York, N. Y. (Heavy duty Portable)
 Electric Vacuum Cleaner Co., Inc.; 1734 Ivanhoe Rd., Cleveland, Ohio. (Portable)
 Electrolux, Inc.; 250 Park Ave., New York, N. Y.
 Invincible Vacuum Cleaner Mfg. Co.; 15th St., Dover, Ohio. (Heavy duty Portable)
 Kent Co., Inc.; 542 Dominick St., Rome, N. Y. (Portable)
 Scott & Fetzer; W. 114th & Locust Ave., Cleveland, Ohio (Portable)
 Spencer Turbine Co.; 517 New Park Ave., Hartford, Conn. (Heavy duty, Stationary and Portable)
 Sturtevant Co., Inc.; B. F.; 16 Damon St., Hyde Park, Boston, Mass. (Heavy duty, Portable and Stationary)
 United Electric Co.; Canton, Ohio. (Portable and Stationary)
 Wise McClung Corp.; Box WD, 451 Park Ave., N. W., New Philadelphia, Ohio (Portable)

VAULTS, FUMIGATION

Caleyanide Co.; 60 East 42nd St., New York, N. Y.
 (See advertisement elsewhere in this issue.)
 Electrolux, Inc.; 250 Park Ave., New York, N. Y.
 Furniture Fumigation Corp.; 100 West 101st St., New York, N. Y.
 Haskellite Mfg. Corp.; D & W. 2-Gray, 120 So. La Salle St., Chicago, Ill.
 (See advertisement elsewhere in this issue.)

EXTERMOVULT



DESTROYS MOTHS—PREVENTS CRUSHING
FURNITURE FUMIGATION CORP.
 100 W. 101st ST., NEW YORK CITY

SEE PAGE
 135 OF 1930
 WAREHOUSE
 DIRECTORY

WHEELS

Budd Wheel Co.; 25th & Hunting Park Ave., Philadelphia, Pa.
 (See advertisement elsewhere in this issue.)
 Electric Wheel Co.; Walton Heights, Quincy, Ill.
 Morand Cushion Wheel Co.; 818 S. May St., Chicago, Ill.
 Sewell Cushion Wheel Co.; 6468 Gratiot St., Detroit, Mich.

WORK SUITS

Brownstein-Lewis Co.; 751 So. Figueroa St., Los Angeles, Cal.
 Burnham, Munger, Root Dry Goods Co.; 8th and Broadway, Kansas City, Mo.
 Carhartt-Hamilton Cotton Mills; Michigan Ave. and Kent St., Detroit, Mich.
 Cohn, Goldwater Co.; 525 E. 12th St., Los Angeles, Cal.
 Courtney & Son, Thomas; 310 Spring St., New York, N. Y.
 Crown Overall Mfg. Co.; 3rd and Plum Sts., Cincinnati, Ohio.
 Efronson & Wolf; 360 W. Washington St., Indianapolis, Ind.
 Elder Mfg. Co.; 13th and Lucas Sts., St. Louis, Mo.
 Finch, Van Slyck & McConville; Park Square, St. Paul, Minn.
 Finck & Co., W. M.; 3708 Gratiot Ave., Detroit, Mich.
 Fleishner, Mayer & Co.; Portland, Ore.
 Globe Superior Corp.; Lock Drawer C, Abingdon, Ill.
 Goll & Frank Co.; East Water and Buffalo Sts., Milwaukee, Wis.
 Greenbaum, Well & Michels; 742 Mission St., San Francisco, Cal.
 Hanke Bros.; Main and 12th Sts., Cincinnati, Ohio.
 Hart Mfg. Co.; 16 E. Livingston St., Columbus, Ohio.
 Hirsh-Weis Mfg. Co.; Portland, Ore.
 Industrial Garment Co.; 100-03 Liberty Ave., Ozone Park, Long Island, N. Y.
 Lamb Mfg. Co.; 1301 Wabash Ave., Terre Haute, Ind.
 Lee Mercantile Co., H. D.; Trenton, N. J.
 Lindeke, Warner & Son; St. Paul, Minn.
 McDonald Mfg. Co.; R. L.; Twelfth and Penn Sts., St. Joseph, Mo.
 Miller Mfg. Co.; Paris, Texas.
 Miller Mfg. Co.; C. R.; Dallas, Texas.
 Motor Suit Mfg. Co.; 208 W. 8th St., Kansas City, Mo.
 Nunnally & McCrea Co.; Atlanta, Ga.
 Oberman Mfg. Co.; D. M.; Jefferson City, Mo.
 Oppenheimer & Co., M.; 938 Penn St., Pittsburgh, Pa.
 Oshkosh Overall Co.; Oshkosh, Wis.
 Phoenix Mfg. Co.; 1201 So. Sharp St., Baltimore, Md.
 Pierson Mfg. Co.; Quincy, Ill.
 Protetall Co.; Abingdon, Ill.
 Ranney-Davis Merc. Co.; Arkansas City, Kans.
 Red Diamond Clothing Co.; 801 Lucas St., St. Louis, Mo.
 Rice-Stix Co.; 1008 Washington Ave., St. Louis, Mo.
 Rockford Overall Mfg. Co.; Rockford, Ill.
 Scott Mfg. Co.; Cyrus W.; Houston, Texas.
 Scowcroft & Sons Co.; John; Ogden, Utah.
 Sibbett Mfg. Co.; Oakland, Cal.
 Signal Shirt Co.; Racine, Wis.
 Smith-McCord-Townsend Dry Goods Co.; 8th and Broadway, Kansas City, Mo.
 Spokane Dry Goods Co.; Spokane, Wash.
 Standard Garment Co.; Cor. Michigan and Orange Sts., Toledo, Ohio.
 Strauss Bros.; 109 Hopkins Pl., Baltimore, Md.
 Strauss, Levi & Co.; Battery and Pine Sts., San Francisco, Cal.
 Stuart, Keith & Co.; Fayette and Greene Sts., Baltimore, Md.
 Sweet, Orr & Co.; 15 Union Square, New York, N. Y.
 Union Special Overall Co.; Central Parkway at 14th St., Cincinnati, Ohio.
 Waco Garment Mfg. Co.; Waco, Texas.
 Welch-Cook-Beals Co.; 321-29 So. Third St., Cedar Rapids, Iowa.
 Wyman-Partridge & Co.; 4th St. and 1st Ave. No., Minneapolis, Minn.
 Zions' Co-oper. Merc. Institution; Salt Lake City, Utah.

By a process of starting and stopping advertising, the willing public never gets a chance to remember the product.

FALL IN LINE



TO MAKE
 1931
 A BANNER
 BUSINESS
 YEAR



DISTRIBUTION AND WAREHOUSING WILL DO ITS SHARE

WHEN WRITING ADVERTISERS MENTION DISTRIBUTION AND WAREHOUSING

1931 AMERICA—FORWARD MARCH



Above size in 2 colors, red and blue, on gummed, coated stock. For all mailing, show-cards, packages, etc. Price \$2.00 a thousand.

Constructive thinking and action will revive American Business. It, therefore, becomes the duty of all of us to think, talk and act constructively about

1931

Confidence and action must take the place of fear and indecision.



2 color buttons. For the lapel of every coat. Ideal for conventions and all sales contacts. Price \$10.00 a thousand.

SHOW CARDS

Illustration of the insignia printed in two colors on heavy 8 ply cardboard. Size 7" x 10" vertical. For window displays, office walls, truck bodies, etc. Price 5c each in small quantities. Orders for 500 and over 2½c each.

1931 AMERICA FORWARD MARCH

POSTERS

Illustration of the insignia in two colors on heavy coated paper. Size 9" x 12" with room for an imprint. For office walls, windows, mailing inclusions, etc. Price 25c a dozen, \$7.50 a thousand. (Imprints of moderate size \$1.50 extra per thousand or fraction thereof.) Large posters 30" x 40" with insignia in two colors on heavy paper—\$1.00 each, \$75.00 per 100.

Here is a phrase with the ring of confidence and an insignia with the impulse to action. They have been combined and adapted to stickers, show cards, posters and buttons.

Let's make this slogan and insignia a banner around which we may rally our best efforts, and through these mediums, shown above, impart our own confidence to the end that better business sentiment may be fostered and a definite movement toward normalcy be set in motion.

Invoices cannot be billed. Mail your order, with proper remittance, to:

DISTRIBUTION & WAREHOUSING
249 WEST 39th STREET, NEW YORK, N. Y.

WAREHOUSE DIRECTORY

A Guide to representative Merchandise, Cold Storage and Household Goods Warehouses, Forwarders, Terminals, and Transfer Companies, arranged by States and Towns

"Andy Says"

If you like a sea voyage or need the rest that goes with most boat trips—keep in mind one that is outstanding for health, rest and excellent cuisine. I refer to the trip from New York to New Orleans via the "Morgan Line" operated by the Southern Pacific Steamship Company.

Anyone going East or West through the New Orleans gateway should try this trip at least once. In all probability they will want to make it many times more and will look forward to the rest and comfort plus the hospitality of a wonderful crew.

Leaving New York on Saturday noon, one travels about four days down the east coast, turns at Key West and for another two days sails northwest in the Gulf of Mexico to the mouth of the Mississippi River. The last half day is spent in navigating the lower Mississippi through the delta lands, arriving in New Orleans at 7:00 A. M. the following Friday morning.

There are in all three passenger ships on this route, the "Dixie", the "Creole" and the "Momus". They are all good sea going ships and except when mixed up in a squall, (which is seldom), they ride like a baby carriage.

I have had the pleasure once more of a trip on the "Creole" to New Orleans to attend the N.F.W.A. meeting in San Antonio and I hope there may be many who can travel



CAPTAIN H. T. BOYD

this way another year. If so, take the opportunity. Meet Captain H. T. Boyd, Commander of the "CREOLE", Captain Jacobs of the "DIXIE", or Captain Lundstrum of the "MOMUS". It is a great treat for anyone.

It was in October, 1918, that we read in the newspapers one morning of the sinking of the "ANTILLES" somewhere off the coast of France. Names of men and the deeds of heroes fade from mind with the passing of time so it requires a direct question (which may or may not be answered) of Captain Boyd if he was the master of the "ANTILLES" when she was torpedoed. The names are the same and so are the men but Skipper Boyd doesn't talk much about it. The facts are he stood on the bridge of the "ANTILLES" as her master when she was first torpedoed, later saw another torpedo sent into the doomed vessel to make certain her doom. Sixty-seven men were lost, though some were rescued by the Alcido and Corsair then in the service. The Alcido was torpedoed the week following the rescue of the Captain and his crew.

Captain Boyd knows "DISTRIBUTION AND WAREHOUSING", he knows also several in our industry and wants any warehouseman who may in the future travel with him to make himself known as a "warehouseman".

More power to you Captain Boyd. Good luck and many a bon-voyage. May we meet some time again in the future.

"Andy"

CONVENTION CALENDAR

(Annual or Semi-Annual Meetings)

February 10....	Pennsylvania Furniture Warehousemen's Association.....	Philadelphia	March 10.....	Oregon State Warehousemen's Association.....	To be announced
February 11....	Los Angeles Warehousemen's Association.....	Los Angeles	March	Arkansas Transfer & Warehousemen's Association.....	To be announced
February 11....	Maryland Furniture Warehousemen's Association.....	Baltimore	March	Michigan Warehousemen's Association.....	Detroit
February 17....	New York State Cold Storage Association.....	To be announced	March	Toledo Warehouse & Transfermen's Association.....	Toledo
February 20-21..	Kansas Warehouse & Transfermen's Association.....	Emporia	April 5-6....	Washington Motor Freight Association.....	To be announced
February	California Van & Storage Association.....	To be announced	April 15....	Portland (Oregon) Draymen & W. A.....	Portland
February	Florida Warehouse & Transfer Association.....	To be announced	April	Colorado Transfer & Warehousemen's Association.....	To be announced
February	Iowa Warehousemen's Association.....	To be announced	April	Maryland Warehousemen's Association.....	Baltimore
February	New York, Van Owners' Association of Greater.....	New York City	April	Minnesota Warehousemen's Association.....	To be announced
February	Ohio Association of Commercial Haulers.....	To be announced	April	Missouri Warehousemen's Association.....	To be announced
February	Ohio Warehousemen's Association.....	To be announced	April	Pacific States Cold Storage W. A.....	To be announced
February	Pennsylvania Motor Truck Association.....	To be announced	April	Upper New York Warehousemen's Association.....	New York City
February 20-21..	Texas Warehouse & Transfermen's Association.....	Houston	June	Canadian Storage & Transfermen's Association.....	Winnipeg
March 3.....	Southwest Transfer Men's Association.....	El Paso	July	National Furniture Warehousemen's Association.....	To be announced

WHEN WRITING ADVERTISERS MENTION DISTRIBUTION AND WAREHOUSING

BIRMINGHAM, ALA.

1880—Fifty Years of Honorable Service—1930

**HARRIS TRANSFER
AND
WAREHOUSE CO.****FIREPROOF WAREHOUSES
MERCHANDISE and HOUSEHOLD GOODS
STORAGE HAULING PACKING***Prompt Service—Accurate Accounting***First Ave., at 13th St., South**

Members: A. W. A., N. F. W. A., SO. W. A., ALA. T. & W. A.

BIRMINGHAM, ALA.

Hess-Strickland Transfer & Storage Co.**General Merchandise, Furniture
and Household Goods Storage**Distribution of Pool Cars Given Special Attention—Motor Trucks in
Addition to Wagon Equipment—Track Connections with All Railroads.

BIRMINGHAM, ALA.

WITTICHEN**Transfer & Warehouse Co.
Fireproof Warehouse
Household Goods and Merchandise**Members
S. W. A. & N. F. W. A.

MOBILE, ALA.

**Ferriss Warehouse & Storage Company
10 Springhill Ave.****MOVING—PACKING—SHIPPING
STORAGE
HOUSEHOLD GOODS
LONG DISTANCE MOVING
Allied Van Lines**

MONTGOMERY, ALA.

Alabama**Motor Transfer & Warehouse Company
Complete Warehouse and
Distribution Service Merchandise & H. H. Goods
Free Switching All Lines***"Special Attention Given Pool Cars"***121-123 Randolph St.**

Members, A.W.A., N.F.W.A., S.O.W.A.

MONTGOMERY, ALA.

**MOELLER TRANSFER & STORAGE CO.
210-220 COOSA STREET****Merchandise and Household Goods
Low Insurance Rate Bonded Trucking Service
Pool Car Distribution**

Members: A.W.A., N.F.W.A., So. W.A.

PHOENIX, ARIZONA

**ARIZONA STORAGE and DISTRIBUTING Co.
MERCHANDISE and HOUSEHOLD GOODS
POOL CAR DISTRIBUTION***Lowest Insurance Rates**Trucking Service***18 SOUTH CENTRAL**

N.F.W.A.—A.W.A.

PHOENIX, ARIZONA

H. W. CHAMBERS, PRESIDENT

Chambers Transfer and Storage Co.**42 South Fourth Avenue****Storing and Packing Moving and Shipping
Warehousing and Distribution service for merchan-
dise and furniture.**

Sprinklered warehouse—Insurance rate 46c.

PHOENIX, ARIZONA

**The Lightning Moving &
Storage Co.****TRANSFER
AND
STORAGE**Storage capacity 68,000 sq. feet. General receiving and
forwarding agents. Pool car distribution our specialty.

TUCSON, ARIZONA

Tucson Warehouse & Transfer Co.**POOL CAR DISTRIBUTORS
FIREPROOF STORAGE****110 East Sixth Street****Tucson, Arizona**

FORT SMITH, ARK.

**O.K. TRANSFER & STORAGE CO.****Rogers Ave. and 2nd St.
FORT SMITH, ARK.****Storing—Shipping—Moving**

Pool-Car Distributing a Specialty



LITTLE ROCK, ARK.

Commercial Warehouse Co.**801-7 East Markham St.****"A COMPLETE SERVICE"****Modern Offices—Storage—Drayage & Distribution
Located in the heart of the wholesale and
shipping district****Fireproof Sprinklered Low Insurance****Private Railroad Siding****Quick Service**